

In This Issue—*What Flat Rate Did for Pence*

MOTOR AGE

Vol. L
Number 5

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CHICAGO, AUGUST 5, 1926

Thirty-five Cents a Copy
Three Dollars a Year

**Four things doubled
Jordan sales this
year—Line Eight
motor—All-steel
body—Price—**

**And one other fact
—the high resale
value of the car.**

Edward S. Jordan

President
Jordan Motor Car Company, Inc.
Cleveland

Something big is happening among fine cars

Everyone in the industry recognized many months ago that the beautiful Hupmobile Eight had evolved from the straight-eight principle a new kind of performance and a new and almost incredibly higher value.

The word spread about very quickly that probably only one car in the world was comparable to the Hupmobile Eight.

And that car was the product of the fine European engineering genius—a hand-built eight-cylinder car costing several times the Hupmobile Eight price.

What is happening in the automobile industry, however, goes deeper than this startling of automobile engineers and manufacturers.

The new development has to do with the way the American people now *think* of fine cars and fine performance.

It is, in the first place, an uprooting from the public mind of the old-fashioned idea that *mere price or name must necessarily mean prestige.*

Motor car buyers are now sensing the prestige of super-fine performance, the prestige of the newest and the best when that newest and best is the super-efficient development of a super-efficient principle, as with the Hupmobile Eight.

So the Hupmobile Eight, is in a way, erecting a new aristocracy of motordom, attracting to its banner the people who rate highly beauty and performance and value, and who buy with unerring, shrewd judgment.

In the second place, it is a new and better conception of what fine performance really is—and of the utter superiority of the eight-cylinder principle, as perfected by Hupmobile, in providing such performance.

Beauty—Color Options—Luxury

Sedan, five-passenger, \$2345. Sedan, seven-passenger, \$2495. Berline, \$2445. Sedan Limousine, seven-passenger, \$2595. Coupe, two-passenger, with rumble seat, \$2345. Roadster, with rumble seat, \$2045. Touring, five-passenger, \$1945. Touring, seven-passenger, \$2045. All prices f. o. b. Detroit, plus revenue tax.

In the fine-car field, the trend is undoubtedly toward Eights

The Beautiful **Hupmobile Eight**

The Very Material Reduction in Prices Has Brought the Highest Grade Tires Well Within the Reach of the Average Man

Now is the time to put real effort into selling tires like the Fisk Balloon and high pressure Cord Tires.

Most car owners value quality and will buy it when prices decline. It is the upward tendency that brings sales resistance.

Take advantage of the present situation. It is good business for you to sell and for your trade to buy the best the market affords. The prices that are now in effect make this possible as well as desirable.

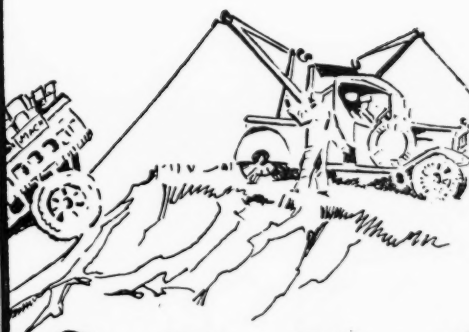
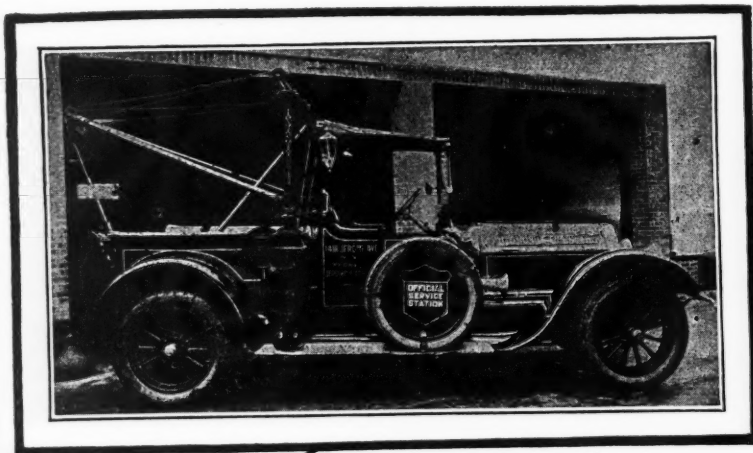


Time to Re-tire
Get a FISK
TRADE MARK REG. U.S. PAT. OFF.

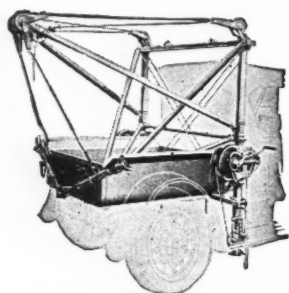
The Fisk Tire Company, Inc.
Chicopee Falls, Mass.

FISK

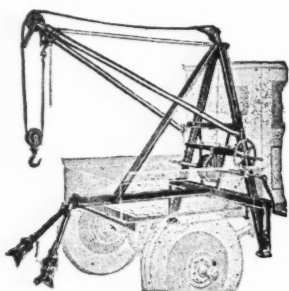
TIRES



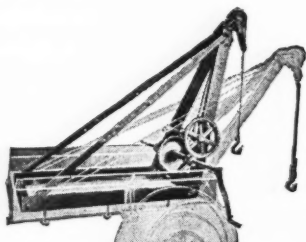
In Ten Months A HOLMES WRECKER TRIPLED OUR BUSINESS



Holmes Wrecker No. 485



Holmes Wrecker No. 250



Holmes Wrecker No. 110



Ask your Jobber to tell you about the three types of Holmes Wreckers, Holmes Cantilever Jack, Holmes Garage Press, Holmes "V" Tow Bars and Holmes Towing Pole or write this company for complete information about Holmes Equipment.

ERNEST HOLMES COMPANY, Chattanooga, Tenn

MOTOR AGE

Reg. U. S. Pat. Office

Vol. I

No. 5

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When adjusting bearings, all you have to do is PEEL off the layers of shim brass to the required thickness.

Time also saved for other jobs. Labor greatly reduced and no filing or fussing.

The far-sighted serviceman uses Laminum for shims. Not only because there is little effort and greater profit per job, but because Laminum gives better results.

The surface is smooth as glass and accurate to the thousandth of an inch.

Ask your jobber for Laminum. There's a shim for every kind and type of engine.

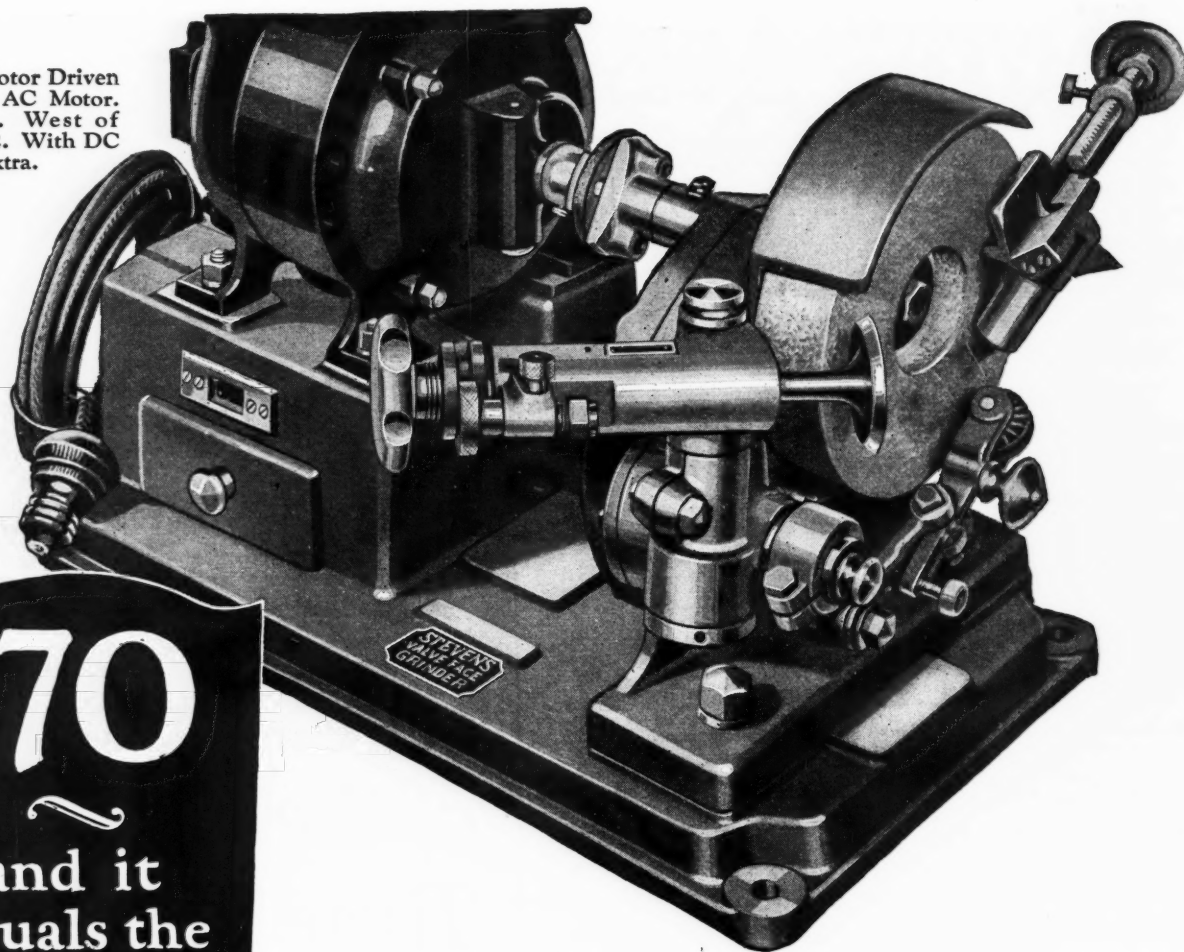
LAMINATED SHIM
COMPANY, INC.

236—14th Street
Long Island City, N. Y.
St. Louis: Mazura Mfg. Co.



LAMINUM

T-282—Motor Driven Model with AC Motor. Price, \$70. West of Rockies, \$72. With DC Motor, \$5 extra.



\$70

and it
equals the
work of the
high-priced
machines/

STEVENS VALVE FACE GRINDER

A COMPLETE motor-driven model at a price that marks an achievement in high grade machine designing.

Accuracy to 1/1000th of an inch—speed—endurance—ease of operation! Qualities heretofore found only in high priced machines now made possible in a popular priced model, through simplified design.

Anyone can get high precision on valve face work with the "Stevens"—no skill is required.

It's a handy all-around grinder, too. Special attachments for accurately sharpening drills, chisels and shears; and for grinding down valve stems, push rods, tappets and piston pins—all included without extra charge. Order through your "Speed-Up" jobber today.

Write us for new Handbook 18 showing action pictures of all "Speed-Up" Tools.

T-281—Hand Driven Model with pulley for belt-drive from shafting or motor. Price, \$29. West of Rockies, \$30. Price includes same attachments as T-282.



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**Largest
Line of
Special
Automotive
Tools**

Stevens

**SPEED
UP**



Tools

TRADE MARK REG. U.S. PAT. OFF.

TELEGRAMS! TELEGRAMS! TELEGRAMS!

PREVIEW SHOWING SENSATIONAL. MOST BEAUTIFUL LINE OF CARS WE HAVE HAD IN TWELVE YEARS EXCLUSIVE STUDEBAKER DEALERSHIP. C.W. UPCHURCH & CO. CHARLOTTE, N.C. QUALITY CAR IS CREATING GREAT SENSATION HERE. ACCEPT HEARTIEST CONGRATULATIONS ON THESE NOTABLE NEW ADDITIONS TO STUDEBAKER LINE. SANTA BARBARA MOTOR CO., SANTA BARBARA, CAL. DESPITE THUNDER STORM PREVIEW ATTENDANCE ELEVEN HUNDRED PEOPLE. THIS WILL BE A BIGGER YEAR FOR STUDEBAKER. M.L. MUMMA, HARRISBURG, PA. WONDERFUL BUSINESS IN PROSPECT FOR ALL OF US. NACHTRIEB CO., DALLAS, TEXAS. UNIVERSAL COMMENT FROM PROSPECTS MOST BEAUTIFUL CLOSED CARS EVER DISPLAYED. H. E. JOHNSTON CHARLOTTE N.C. OPENING NIGHT GREAT SUCCESS. SIDEWALK AND STREET CROWDED WITH PEOPLE AND CARS WAITING TO SEE CUSTOM SEDANS. THURMAN SMITH CANTON OHIO. SOLD THREE PRESIDENTS THREE STANDARD CUSTOMS THREE CUSTOM BROUGHAMS LAST NIGHT. CROWD WAS AT LEAST FIFTY ORDERS TO US. F. L. SHOLES NEWARK N.J. PRESIDENTIAL INAUGURATION EXCEEDED MOST OPTIMISTIC EXPECTATIONS. TWENTY FIVE HUNDRED VISITORS. SOLD FIVE PRESIDENTS AND THIRTEEN OTHER NEW MODELS. CHEROKEE MOTOR CO. KNOXVILLE, TENN. PREVIEW OPENED EIGHT O'CLOCK. AT EIGHT FIVE MISTER A. JOHN PRESIDENT JOHN MERCANTILE

CO. SIGNED ORDER FOR PRESIDENT CUSTO PURCHASE PRESIDENT IN NEBRASKA. FRAN COMPLIMENTARY MUCH ENTHUSIASM RUSH S TON TEX. IT'S A GOOD JOB WELL DONE. GARAGE INC. SHAMOKIN PA. PUBLIC OPINI HERE. G. C. CHANDLER FLORENCE SO. CA EVERYONE FEELS THAT WE ARE SET FOR A C. R. ARENSCHIELD MINNEAPOLIS MINN. RETT CHEWNING CO. INC. ROANOKE VA. O ANCE. SIX ORDERS LAST NIGHT. L. EDIS DEALERS HAVE WONDERFUL YEAR BEFORE T PEAK. HART. I. WEAVER SAN FRANCISCO FORTH SUCH FAVORABLE EXPRESSION. NO NEW LINE WILL GO BIG. MONONA MOTOR S ON THE MARKET. WE WILL RECIPROCAT E B ALL WHO HAVE SEEN THEM ENTHUSIASTIC. BALTIMORE MD. CONGRATULATIONS ON IME LIS RETAIL BRANCH. SALES ROOMS PACKE TEX. PREVIEW SHOWING SPLENDID SUCCES THUSIASTICALLY RECEIVED ESPECIALLY B LADELPHIA PA. TWO HUNDRED NEW PROSPE MARCHESE AUTO SALES PASSAIC N.J. THE MONSTRATION SINCE SIGNING OF MECKLIN COUNT VISITED OUR SHOWROOM. C. L. HO COMMENTS FROM EVERYONE. ALL ENTHUSIA NOVA SCOTIA. SEVEN HUNDRED VISITORS AUTO CO. OSHKOSH WIS. WE WILL CLOSE JOPLIN MO. PREDICT CUSTOM SEDANS WIL SCRANTON PA. THE NEW CARS ARE SIMPLY HELD PREVIEW SHOWING THIS EVENING HA VIDENCE OVER NEW CUSTOM SEDANS GREAT

WEINRICH MOTOR SALES CO. SAN ANTONIO TEX. OUR SHOWROOM WAS CROWDED TO CAPACITY MORE THAN TWO THOUSAND PEOPLE ATTENDING INITIAL SHOWING OF NEW STUDEBAKER CUSTOM SEDAN TONIGHT PERIOD THINK BUSINESS WILL RESULT FROM THIS ENTHUSIASTIC RECEPTION CONGRATULATIONS ON THE PRODUCTION OF THESE FINE STUDEBAKERS NATIONAL MOTOR CAR CO. THODES SALES MANAGER. OUR SHOWROOM WAS CROWDED TO CAPACITY MORE THAN TWO THOUSAND PEOPLE ATTENDING INITIAL SHOWING OF NEW STUDEBAKER CUSTOM SEDAN TONIGHT PERIOD THINK BUSINESS WILL RESULT FROM THIS

A Country-wide Wave of Commendation for STUDEBAKER CUSTOM SEDANS

A thousand telegrams
all telling the same sen-
sational story of success

Only one word can describe them

—Beauty!

Only one plant can produce them

—Studebaker!

Only this makes them possible

—One-Plant facilities!

—And Studebaker dealers everywhere
are selling them hand over fist!

SIDENT TO
Y REMARK
ETER HOUS-
EDGEWOOD
EVER SHOWN
HIS WEEK.
3 MONTHS.
DUCED. JAR-
ON APPEAR-
AND THEIR
RIGHT AT
BROUGHT
STER N.Y.
ASSIEST CAR
MBIA. S.C.
. PAULWILL
MINNEAPO-
BEAUMONT
COLORS EN-
HARPER PHI
VER HIGH.
REATEST DE-
BY ACTUAL
AVORABLE
O. HALIFAX
F. THE THOM
. J. BELL
& SON CO.
IBUNE CLYDE
SIASM IN E-
OM MANY.

STUDEBAKER

ENTHUSIASTIC RECEPTION CONGRATULATIONS ON THE PRODUCTION OF THESE FINE STUDEBAKERS. NA-
TIONAL MOTOR CAR CO. THODES SALES MANAGER. ALTOONA PA. WE SECURED FOUR ORDERS AND MANY

"How to build the Stutz car for next year and the years to come— build it just as it is!"

is the recommendation of

W. J. Benson
President

BENSON MOTOR CO.
SAN FRANCISCO

WHEN an automobile man who has been a merchant and manufacturer for twenty years says, after five months' experience with the New Safety Stutz, "*continue to build it as it is*"—it sounds pretty good.

In fact, there could hardly be a more eloquent expression of a dealer's satisfaction with a car's mechanism than Mr. Benson's letter at the right.

One of the reasons why automobile merchants are finding the Stutz franchise such a money-maker lies in this absence of profit-killing service.

We invite correspondence from other good dealers who appreciate the money-making value of a car that is both new and sound.

STUTZ MOTOR CAR CO.
of AMERICA, Inc., Indianapolis

Stutz Motor Car Company of America, Inc.
Indianapolis, Indiana
Dear Sirs:

Of course you remember that I went to the factory just about a year ago to learn the plans of the Stutz Company, and you know the result. I went home and discontinued every other line that I was handling to concentrate on the Stutz Eight, Safety Chassis. However, I am going to say frankly to you, I did not look for as much sunshine as I have received. I really looked for a lot of clouds.

I am very pleased to say that you have less trouble in this automobile than a lot of others have in their cars, because you have nothing chronic. I know a number of them who have. As the result, I am going to tell you how to build the Stutz car for next year, and the years to come. Build it just as it is and continue to build it as it is and be just as careful as you have been in the past.

I know the Straight Eight is right and I want to say you have the best Straight Eight in the market, so leave it alone; do not touch that motor. Another thing you have right is the worm axle; leave it alone. The transmission and clutch are right, and your steering is the best in the market. Your carburetor is giving one hundred per cent efficiency, and, for goodness sake, do not change the chains on your motor.

The chains are noiseless and efficient and when I tell you that I have shipped a carload of timing-gears back to the factories during my experience with timing-gears, you can realize why I want you to continue on the chains. You have a great chassis—please leave it alone.

In the first five months of the year we have developed an account that is worth thousands of dollars to us and we have made a profit as well.

Yours very truly,
BENSON MOTOR COMPANY,

W. J. Benson
President.



New
SAFETY STUTZ



The Life Stream of Motor Cars

A dazzling, fiery stream empties great bucket-like "ladles" of molten metal into molds that form twelve-sided "ingots" of steel. Here flows the very life-substance of automobiles and motor trucks.

Only Timken's own mill, with the largest output of electric furnace steel in the world, produces this fine material. It is destined for the bearings of all types of mechanical devices, including 91% of all makes of motor vehicles in America. The bearings make the life of motor cars or trucks, because the bearings are

what takes the motion. Right where the motion comes—in transmissions, differentials, pinion or worm drives, rear wheels, front wheels, steering pivots, and fans—it is vital to know that you have the finest steel for the purpose. Timken Bearings assure you not only as to material, but also as to enduring design.

The wear of thrust, shock, torque and speed is defeated by such factors of design as Timken *POSITIVE ROLL ALIGNMENT* and Timken Taper. By eliminating excess friction

Timkens get more out of fuel, lubricant and power. Timkens also occupy less space for their extreme capacity, so that lighter weight, better accessibility, and lower cost are possible.


Only improved economy, smoothness and endurance could be adding 132,000 Timken Bearings daily to 150,000,000 already universally applied. Timken-equipped cars and trucks are in line with the whole automotive and industrial trend.

THE TIMKEN ROLLER BEARING CO.
CANTON, OHIO

TIMKEN *Tapered Roller* BEARINGS

THE SATURDAY EVENING

There can be no Compromise with Safety




**SMOOTH ROAD
WET RUBBER
Crash!**

Midsummer, no snow or ice this side of Yukon Territory. So you sail along over smooth concrete roads with never a thought of anti-skid chains—even after the first drops of rain turn into a steady shower.

But remember: Wet rubber always slips, and it isn't only when you jam on your brakes that you'll start skidding. It's the unexpected side slip—the terrible skid—that catches you unawares and throws your car out of control.

Don't take a chance! Put on WEED Chains and drive a little slower at the first drop of rain . . . (you can't hurry once you land in the hospital).

 WEED Chains have stopped wet rubber from skidding for 23 years. You can identify them by their red connecting hooks, galvanized side chains, and brass-plated cross chains with the name WEED stamped on every hook.

Don't risk a skid—use
WEED CHAINS
Standard for 23 years

Now you
tell them

“Wet Rubber
Slips”

If you have any doubt about it, take your pencil eraser and rub it over a window pane. See how it holds on. Then wet the rubber and try it again. It slides along like slippery soap on your bathroom floor!

But WEED Chains Grip

Tell your customers that wet rubber slips and sell them WEED Chains for safety's sake. Don't wait for winter snows. Sell them now for safety in summer and autumn rains. Remind your customers that a set of WEED Chains is much cheaper than a trip to the hospital and a smashed up car.

Sort up your stock, spread the fact that wet rubber slips — and sell more WEED Chains.

AMERICAN CHAIN COMPANY, Inc.
BRIDGEPORT, CONNECTICUT
In Canada: Dominion Chain Co., Limited, Niagara Falls, Ontario
District Sales Offices: Boston, Chicago, New York, Philadelphia, Pittsburgh, San Francisco
World's Largest Manufacturers of Welded and Weldless Chains for All Purposes

WEED CHAINS

“The most profitable of all accessories”

The Greatness of Automotive Transportation

*Rapidly Growing Magnitude of Newest Form of Commercial Carrying
Revealed in First of Series of Hearings Before
Interstate Commerce Commission*

By SAM SHELTON

IN the official records of the Interstate Commerce Commission there now reposes a comprehensive preliminary picture of the rapidly growing magnitude of automotive transportation over American highway, as a result of the first hearings on this subject held in Chicago last week.

Attached to this picture are three widely divergent interpretations. One by the railways brands the truck and the bus as unfair competitors and lodges a mild measure of complaint against the private passenger automobile.

Another by truck and bus operators and a large group of shippers evaluates motor transport as an essential service in the conduct of modern business.

And the third interpretation by Thomas H. McDonald, chief of the United States Bureau of Public Roads, is simply this:

The public is engaged in choosing what type of transportation it prefers and in fitting the various available means of transportation into their respective fields of greatest utility.

The Chicago hearing, presided over by Commissioner John J. Esch and lasting three days, was the first of 13 to be held in cities throughout the United States, and as an introductory measure the National Automobile Chamber of Commerce, the American Automobile Association and other organizations, saw to it that a broad view of the whole motor vehicle industry was presented.

As an agency having regulatory jurisdiction over the railways and other defined means of transportation en-

How 70,000 Buses Operate

Nearly 70,000 motor buses were operating in the United States on Jan. 1, 1926, according to figures compiled by the National Automobile Chamber of Commerce.

The numbers of buses, classified according to the service they are engaged in, at the beginning of 1926 as compared with a year earlier, are given in the following table:

| | January 1 | |
|---------------------------------------|---------------|---------------|
| | 1925 | 1926 |
| Common Carrier Operations: | | |
| Intrastate motor carriers..... | 31,100 | 30,475 |
| Interstate motor carriers..... | | 1,500 |
| Electric railways and subsidiaries.. | 3,000 | 5,150 |
| Steam railroads and subsidiaries.... | | 375 |
| Non-Common Carrier Operations: | | |
| Hotel buses | 1,000 | 1,000 |
| Sightseeing and tour companies.... | 1,500 | 2,500 |
| Railroad terminal companies | 250 | 250 |
| Industrial uses | 1,075 | 1,075 |
| Schools (public and private)..... | 15,000 | 27,000 |
| Other miscellaneous uses..... | | 100 |
| Total | 52,925 | 69,425 |

The number of motor trucks, including buses, registered in the United States, July 1, 1926, was 2,407,201.

gaged in interstate commerce, the Interstate Commerce Commission has of its own volition taken cognizance of the increasing extent to which the motor vehicle is becoming a competitor of the regulated carriers and has ordered these hearings for the purpose of collecting facts to be used in making legislative recommendations to Congress.

Indicating his belief that under existing law the Interstate Commerce Commission has no power to regulate motor vehicles engaged in interstate commerce, Commissioner Esch in a statement at the opening of the hearing expressed the hope that sufficient evidence would be gathered at the scheduled hearings to form the basis of recommendations to be submitted to Congress when it convenes in December.

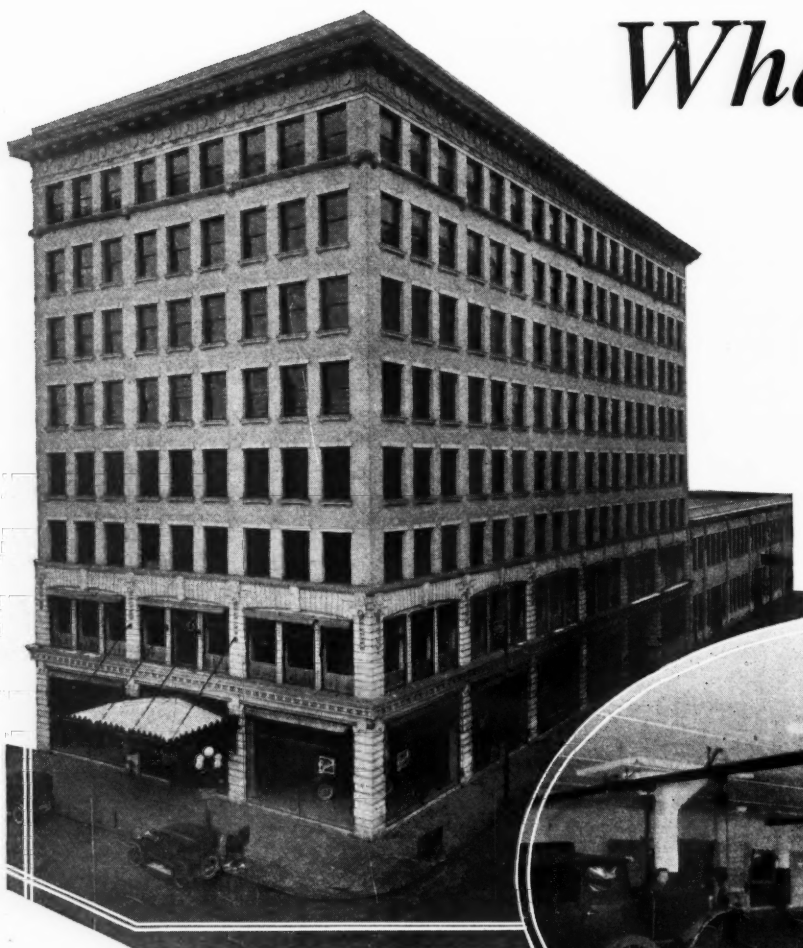
Along with this first batch of evidence the commission gathered into its files three distinct points of view on the matter of regulation of motor vehicles.

The railways as represented at this hearing would like to have Federal regulation of motor vehicle common carriers engaged in interstate commerce.

The bus operators in general would welcome regulation, some favoring state control only and others advocating comprehensive Federal regulation.

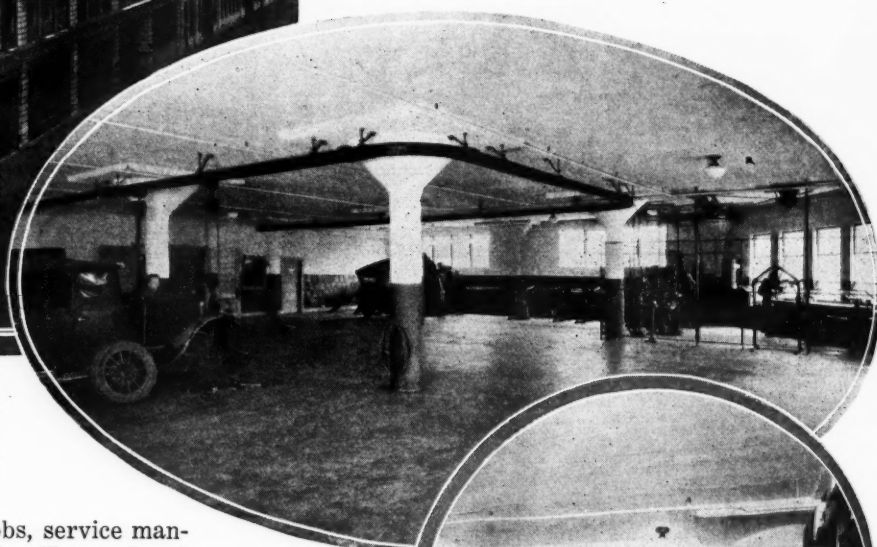
The truck operators and shippers by truck almost unanimously are opposed to any sort of regulation at this time, but if there is to be regulation they want it limited to state authority to issue certificates of convenience and necessity and to require prospective operators to make

(Continued on page 12)



Headquarters of the Pence Automobile Company in Minneapolis. It is here that the flat rates were developed and first applied. This building has its main shop on the top two floors and employs about forty mechanics

What Flat Did for



A clean well lighted and ventilated shop with all necessary equipment helps to keep good mechanics and build profits

Combined stock and tool room in one of the Pence Automobile Company branches



"FLAT Rates," says Mr. C. W. Jacobs, service manager for the Pence Automobile Co., "have placed our service business on a business basis."

The Pence Automobile Co. is distributor for the Buick car in Montana, North and South Dakota, Eastern Wyoming, Minnesota and Western Wisconsin. As their service organization contains shops that range from almost the largest of their kind to the very small ones in the outlying districts their problems are similar to those met by practically any other dealer.

"But while flat rates have made it possible to handle more business with less men, and to pay those men more than they had ever made before, it was no easy job to put over the idea of flat rates," said Mr. Jacobs.

Preliminary Planning Vital

"Cards were prepared covering every operation that had ever been performed in our shops and then the time required to handle 100 such operations was averaged in order that the final time allowance would be fair to all concerned. It was necessary to know just how much the mechanics could reasonably be expected to earn under the new system or it would be impossible to reconcile them to working on the flat rate basis. The co-operation was needed and in order to obtain it it was necessary to allay any suspicions that they might have. This was accomplished by laying the cards on the table and really letting them in on the cost of doing business.

"But at that some of our oldest men were sure that flat rates could never be made to work. They predicted

all sorts of undesirable results, but that was three years ago and now we all know that flat rates have been the making of our service business.

How the Mechanics Made Out

"Of course some of the boys quit. However, when we began to check up we found that the ones who left were the ones who were a liability when they were with us. The ones who stayed were the better mechanics and are averaging 21.2 per cent more money the year around than they ever made before. The men are paid on an hourly basis but not by the clock. Each job has a certain time rating and if the mechanic can do the work in less time he is just that much to the good. This really gives him two chances for a raise. As the men stay with us and become more proficient their hourly rate is increased

Rate Pence

By C. EDWARD PACKER

and as they have any spare time they develop tools or devices with which they are enabled to beat the time schedules and thus increase their earnings.

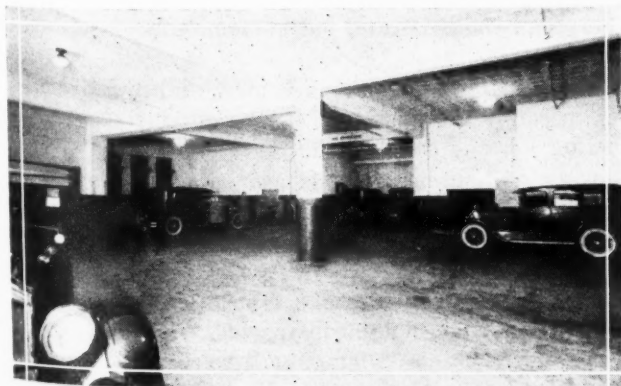
"Our work is all guaranteed to the customer and must be backed up by the mechanic. No time limit is set on this guarantee and in the event of a complaint the matter is impartially considered by the management and the decision is one that is fair to all. This satisfies most customers but there are some owners whom no one can please.

Advantages to the Customer

"The customer has the advantage of knowing just what a job will cost him and exactly when he can have it. When making our investigation of the average time required to handle any particular job a record of the necessary parts was kept and it is possible to tell within a very small amount just what will be needed. If the customer insists on knowing what the total bill will be we quote only on the labor but tell him what we believe the parts will cost and phone him if the parts will exceed that amount. This method has worked out very satisfactorily.

"The results obtained by the service department determine the reputation of the dealer. If a customer requests a repair job that we know will not give him perma-

Service floor where customers' needs are determined and the repair order written up. The customer is invited to use the waiting room if the job is a short one. No one is allowed to stay with his car while it is being repaired



FORTY-FIVE Per Cent Increase
in Business with 40 Per Cent
Reduction in Number of Mechanics,
Resulting in Handsome Profit and
More Money for the Men, Is Record
of Minneapolis Service Station



One of the Pence branches. Flat rates are working out well, even though there are only eight mechanics employed

nent satisfaction we explain to him that all of our work is guaranteed and either sell him on the idea of doing it right or else we turn the job down. The customer who has his work done here appreciates that our guarantee really means something and knows that any complaint will be given careful consideration and if the work was not properly done that it will be made right. But complaints are rarely heard as the mechanics know that the most profitable thing for them is to be sure each job is right before it leaves the shop.

"While the mechanics' pay and also our profits have increased with the use of the flat rate system the cost to the customer has been reduced slightly.

Obligation of the Dealer

"In order to get the most out of flat rates it is absolutely necessary to have the most efficient and labor saving tools. Any suggestion that a mechanic may make is quickly checked up and if worth while is adopted. In the shop we have many labor saving tools of our own construction and are continually on the lookout for anything that will produce a better job or reduce the time of any operation.

"No mechanic who has any right to the name will tolerate waste of time and for their benefit as well as our own we keep an exceptionally complete stock of parts. These parts are carefully stored in bins so marked that requisitions are quickly filled.

"Special tools are available for certain operations and are released only on check. In this manner it is possible to know just where every tool is and to save time of the mechanics by keeping them from running around the shop looking for mislaid equipment.

"Machine work is handled by a machinist in a well equipped machine shop and the mechanics are not permitted to use the special machine equipment. This specialization results in better work in less time and places responsibility for the care of the equipment squarely on one person.

(Continued on page 34)

Varying Views of Bus and

Utility of Motor Vehicles in Helping to Move Nation's Commerce and Passengers Agreed to by All Interests

(Continued from page 9)

satisfactory showing of financial responsibility for the protection of customers and the public against loss and damage.

Much more significant than the views of individuals or groups is the broad and distinct picture of a revolutionary system of transportation developed in a period of 25 years to the point of being America's biggest industry, vaguely visioned by the public, seriously recognized by the trade, but never before so graphically portrayed in an official record.

Outstanding in this record is the appraisal of highway transport by Mr. McDonald of the Bureau of Public Roads, who declared that this new economic facility of the United States in its full aspect is of such magnitude that the question of competition with the older railways systems is merely an incident or by-product of the whole matter. The good that Mr. McDonald expects to come from these hearings is a greater public appreciation of the marvelous progress made in the development of highways and their economic use. He predicted that the volume of highway transport as revealed by witnesses would reach "astounding dimensions," and as instance after instance was related by witnesses the listeners began to get some idea of what he meant.

The competition of transportation in the United States is not new. Mr. McDonald said. It began in the United States a century ago when just after the Government had begun to build roads for the movement of the mails the new railways came along and got the business. There are those, he said, who accuse the railroads of putting the canals out of business. But he does not blame the railroads. In his opinion the public chose its means of transportation, favoring the railways rather than the waterways.

Again the public is exercising its right to choose, he said, and the existing means of transportation must be adapted to the public preference. The new transportation provided by the private automobile, he declared, affords a transportation facility so far exceeding the railways in capacity that there is no comparison. He estimates the immediate capacity of private passenger automobiles at 70,000,000 persons.

In the freight field, however, Mr. McDonald does not see any signs of serious competition for the railways, regardless of the immense volume of truck business being done in certain lines. The freight carrying capacity of trucks operating on the rural highways, he said, is not more than 1.9 per cent of the capacity of steam and electric railway freight cars.

Facts presented here and there throughout the testimony, sometimes dryly and little noticed and sometimes under severe cross examination, present the most significant record of what is happening in the field of automotive transport. From the day by day record these things are revealed:

Thirty-two per cent of Chicago's milk supply is hauled into the city by truck.

Motor buses operating in Illinois represent an invest-

ment of \$8,935,665, of which 79 per cent is in city service. In 1925 buses in Illinois carried 8,153,021 passengers at an average fare of 22.6 cents as compared with 83,553,564 passengers carried in Illinois by railroads at an average fare of 78 cents. And Illinois has 5,243 miles of concrete highway. This from the testimony of Chester G. Moore, executive vice president of the Illinois Motor Transportation Association.

The average operating cost of buses in interurban service in Illinois is 18 cents a mile. This also from Mr. Moore's testimony.

A motor coach service operating between Chicago and a number of Michigan cities, has an authorized capital of over \$1,000,000, fixed assets of \$750,000, operates 58 Fageol coaches, pays \$40,000 a year rent for stations and waiting rooms of which \$15,000 a year is for a station in the Congress hotel, Chicago, and in the first six months of this year carried 287,905 passengers for a gross revenue of \$359,259, with a net income for the period of \$50,964.56.

In Indiana there are 686 towns and villages without any kind of rail connection now being served by busses and trucks.

A Chicago manufacturer of window shade cloth hauls his product to his Indianapolis branch by truck in 10,000-pound lots, leaving Chicago at 4 p. m. and making delivery at the Indianapolis plant at 9 o'clock next morning. It would take three or four days to complete this shipment by rail, l. c. l. freight.

A trucking company at Gary, Ind., receives 15 rail car loads of merchandise a week and distributes it by truck to chain stores in a radius of 40 miles.

Live stock received by truck at the Chicago stockyards increased from 62,000 animals in the first six months of 1925 to 94,000 animals in the first six months of this year. Practically all of this comes from a radius of 100 miles and constitutes less than one per cent of total receipts.

A Chicago wholesale grocer is now distributing 9 per cent of his outbound tonnage by truck. His truck tonnage was 4 per cent in 1921 and 8 per cent in 1925. Practically all of this is in a radius of 35 miles.

A large wholesale dry goods house is using trucks to distribute merchandise to its customers within a radius of 75 to 100 miles almost exclusively. The rate is slightly higher than the rail rate, but customers prefer truck delivery.

A brick manufacturer makes most of his deliveries by truck because the truck takes the product to the construction job and saves handling.

Movers of household goods are using trucks economically for moves up to 350 miles, saving thereby the cost of packing and at least six handlings as compared with shipment by rail.

Poultry hauled into Chicago from a distance of 150 to 200 miles in a specially constructed truck body with a capacity of 7000 or 8000 pounds of poultry showed a shrinkage of from one to two per cent as compared with

Truck Regulation Given by Operators and Shippers

a shrinkage of about 10 per cent in similar shipments by express.

The flexibility of the truck was shown when Indianapolis operators mobilized a fleet and hauled peaches from Vincennes, where they were rotting on the trees, into Indianapolis where they were selling for over \$3 a bushel because commission houses were limiting the quantity brought in by express. The truck operators made a good profit and saved thousands of bushels of peaches for food that otherwise would have gone to waste.

The foregoing are only a few of the instances of truck and bus transportation recited before the commission, but they serve to show in a striking way the definiteness with which the utility of automotive transportation was presented. It was largely through the efforts of the truck committee of the National Automobile Chamber of Commerce that this comprehensive and impressive showing was made. In a statement at the opening of the hearing, A. J. Brouseau, secretary of the N.A.C.C. and president of Mack Bros. Motor Car Co., told the commission that the N.A.C.C. welcomes this investigation and offers all its resources to the end of ascertaining all facts that will be useful in determining any needful control or regulation that the automotive transportation industry may require in the interest of public welfare.

In constant attendance at the hearing was Edward F. Loomis, secretary of the truck committee, who will also be present at all the scheduled hearings in other cities. The presentation of testimony on the part of the automotive industry was under the direction of former Judge C. C. McCord, for many years a member of the Interstate Commerce Commission. Mr. McCord's assistant, F. M. Dolan, will be present at future hearings to question witnesses.

Other representatives of the automotive industry who were present at one or more sessions of the Chicago hearing included Alexander Legge, president of the International Harvester Co.; A. T. Waterfall, vice president of Dodge Brothers; H. H. Rice of General Motors Corporation; J. A. Ritchie, president Yellow Truck and Coach Mfg. Co.; and Alfred Reeves, general manager of N.A.C.C.

Testimony on the part of railways was offered the first day of the hearing. The general trend of this testimony was to show the extent to which the common carriers operating under control of the Interstate Commerce Commission are subject to competition from automotive

vehicles. Although several witnesses attributed loss of revenue to this competition very few of them were prepared to give figures or place the blame exactly for the losses they have suffered.

George J. Charlton, general traffic manager for the Chicago and Alton railroad, gave figures showing how the number of tickets sold at intermediate stations along the company's line between Chicago and St. Louis has fallen off. A few years ago the average number of tickets sold at Normal, Ill., was 1700 a month. This has been reduced

to 837. At Towanda 700 tickets were sold. The number now is 182. In general Mr. Charlton estimated his company has suffered a 50 per cent reduction in station to station passenger traffic, the loss of which he attributed to automotive vehicles, both buses and private cars. Buses are now carrying passengers between Chicago and St. Louis over a concrete highway that practically parallels the Alton tracks for a fare of \$7 one way or \$12 round trip, compared with the one way railroad fare of \$10.40. These buses, it was shown, are operating without certificates from the Illinois Commerce Commission, but are not interfered with because of the

| | |
|---|--|
| PURPLE SWAN Safety Coach Lines, Inc. <hr/> SCHEDULE FOR DIVISION No. 1 BETWEEN ST. LOUIS AND CHICAGO <hr/> MAIN OFFICE AND TERMINAL 810 N. BROADWAY ST. LOUIS, MO. Phone, CEtral 1754 <hr/> CHICAGO TERMINAL 518 SOUTH MICHIGAN Congress Hotel Building Phone, Harison 448 <hr/> GRAY LINE 12 South LaSalle St. Phone, State 228 | |
| ST. LOUIS TO CHICAGO THRU FARE, \$7.00 | |
| Lv. St. Louis..... 8:00 Collinsville..... 8:45 Edwardsville..... 9:05 Stanton..... 9:30 Gillespie..... 9:45 Carlinville..... 10:05 Nilwood..... 10:25 Girard..... 10:40 Virden..... 10:55 Ar. Springfield..... 12:30 Lv. Springfield..... 1:00 Williamsville..... 1:25 Elkhart..... 1:45 Lincoln..... 2:25 Atlanta..... 2:45 Bloomington..... 3:20 Lexington..... 3:30 Chenoa..... 3:45 Pontiac..... 4:00 Odell..... 4:20 Dwight..... 4:35 Wilmington..... 5:15 Joliet..... 5:15 Lemont..... 5:35 Argo..... 7:30 Ar. Chicago..... 8:00 | CHICAGO TO ST. LOUIS THRU FARE, \$7.00 |
| | Lv. Chicago..... 8:00 Argo..... 9:10 Lemont..... 9:45 Joliet..... 10:15 Wilmington..... 11:25 Dwight..... 11:30 Odell..... 11:40 Ar. Pontiac..... 12:00 P.M. Lv. Pontiac..... 12:30 Chenoa..... 12:45 Lexington..... 1:05 Bloomington..... 1:20 Atlanta..... 2:00 Lincoln..... 2:35 Elkhart..... 3:10 Williamsville..... 3:25 Springfield..... 3:40 Virden..... 4:05 Girard..... 4:55 Nilwood..... 5:10 Carlinville..... 5:30 Virden..... 5:50 Stanton..... 6:05 Edwardsville..... 6:35 Collinsville..... 6:50 Ar. St. Louis..... 8:00 |
| Connections to All Points in Michigan, Wisconsin and Northern Indiana | |
| Connections to Kansas City and All Points West | |

Bus lines now operate over long distances with printed schedules

interstate nature of their business.

How electric railways are using buses of their own to fight the competition of independent bus operators was told by Charles W. Chase, vice president of the Chicago, South Shore and South Bend railroad, and Charles A. Thompson, vice president of the Chicago, North Shore and Milwaukee railroad. Mr. Chase's company operates 125 buses over 300 miles of road and has a revenue from this source of \$2,000,000 a year which he considers is a diversion from the revenues of steam and electric lines. Mr. Chase declared that so large a part of the public demanded motor coach service that his company was compelled to provide it.

Despite the large volume of business done by the motor coaches operated by his company, Mr. Chase does not consider this business as profitable. He said it appears highly profitable for about two years and then as coaches begin to be replaced it is found that depreciation has been underestimated and apparent profits become losses.

Foresightedness on the part of the Chicago, North Shore and Milwaukee railroad, an electric line, in establishing bus service four years ago has thus far forestalled any direct competition with it by independent operators, it was testified by Vice President Thompson.

(Continued on Page 34)

How a Newspaper Helps

Kansas City Star-Times Greatly Aids Local Movement of Second-Hand Vehicles Through Exceptional Cooperation with Automobile Dealers

By BEN S. BROWN



Buy UNUSED Mileage

—for that's just what you get when you buy a USED CAR

JUST check the miles the car has already traveled right off the sheet when you buy a used car; then figure the price asked against the "UNUSED MILES" still in the car and you'll be agreeably surprised at the small cost, and realize the more that the new car buyer really pays for the car. You only buy transportation at a fair price. The first owner takes all the depreciation. Ads like this

USED 1922 model, run only 5,500 miles. I.O. tires, motor in perfect condition and buying new car and will sacrifice. \$2,200. 6000 Main st., Kansas City, Mo.

—appear regularly under "Automobiles" in the Classified Columns of The Star, where more good people meet more good people, in a trading mood, regularly, than any other time or place.

THE KANSAS CITY STAR

Phone Harrison 1200—Ask for an Ad Taker



Five Half

is...Ford...or Packard...of car you are interested in advertised in the Au-

ek Bargains in

buy a used car. benefit of deferred your needs that will ly to enjoy a car is no good reason for making

The advertisements reproduced on this page are specimens of "gratis" copy that has appeared in the Kansas City Star-Times in an effort on the part of this newspaper to speed up the local resale movement. The paper's free advertisements have been very effective. Its use of display space was generous

GRATIFYING success in moving used cars to facilitate stocking and exploiting of new cars as wheat money flows into trade channels, is freely credited by dealers here to the unusual co-operation by the Kansas City Star-Times, Kansas City, Mo.

This newspaper has done something almost unique in newspaper circles, in the way of consistent, scheduled advertising, without pay from the industry, of "the motor car ownership idea." The bulk of the advertising has been in behalf of the used car, pointing to the used car advertisements in the classified columns.

Most newspapers do this sort of advertising to support their classified columns, but their use of their own space is spasmodic.

But The Star has since February been running its exploitation of automobiles with exactly the same fidelity as the advertisements paid for by its customers. The advertising has been planned, prepared, scheduled, ordered, just as any commercial advertiser would prepare his campaign.

Paid advertising is more likely to be omitted from the Star's columns, than this automobile exploitation.

The inception of this campaign by the newspaper was due to an accurate understanding of facts in the automobile trade. Dealers no doubt had complained often enough to advertising representatives that if they could clean out their used cars, they could stock and advertise more new cars.

This might have been received as an "alibi." The representatives, particularly the heads of the advertising department, who consulted with George A. Bond, secretary of the Motor Car Dealers' Association, saw that this was truth.

Efforts had been made at various times to bring the

Used Car Sales

dealers into some sort of co-operative movement to reduce the used car stock materially. Those who admitted that there was a "used car problem" declared that "there is no solution," except the hammering away in classified columns. Auctions, sales weeks, heavy advertising campaigns, were all rejected by the dealers.

So the Star undertook to do the solving, by means of advertising, on its own initiative.

It bought syndicate copy for promoting effectiveness of classified advertising, other copy on automobiles, adapted this to Kansas City, prepared copy of its own, and made up its schedule.

Every other Sunday either a full page or four columns was used. Every week day there was an advertisement about automobiles; alternate days a four-inch single column advertisement on the second page, and a four-inch double column advertisement near the classified page.

Occasionally there was a midweek additional display.

The Star did not ask additional advertising from dealers "in appreciation" of this promotion. But it did supply dealers with poster copies of the advertisements, free, for use in their windows. The classified advertising did not increase materially; there was no immediate return to the Star from its effort.

At the same time used cars began to move better. As they moved out, new cars moved in, and new car advertising increased.

The next result was a suddenly enhanced interest in co-operation on used car selling, by dealers. Secretary Bond was able to secure agreements from many for a "Used Car Week," when these dealers would make special effort to have cars conditioned, when prices would be pared down, displays arranged, and a little closer attention given to putting a punch in the used car classified advertising. This week occurred July 11.

No "co-operative advertising" was paid for by the dealers. The Star contributed the space and the copy; large space, several days, urging the value of used cars, urging "buy now."

That week showed more than a 30 per cent gain in used car sales—a gain on top of a very satisfactory movement that had been continuing, with accelerating force, during the months since The Star had begun its consistent plugging for the industry.

At the same time that used cars have been moving more freely. New cars have been showing gains, too, both in the country and in the city. The large outside circulation of The Star in territory covered by most Kansas City car distributors, has affected the public of the smaller towns in the same way as the public in the cities.

The Star gained 77,000 lines of classified advertising in May over April; 40,000 lines in June over May. Its display lineage has gained substantially also. Evidently the value of the space is increasing—partly, no doubt, due to the newspaper's support of its customers' exploitation.

The star is carrying exploitation of real estate under a similar program of "own advertising." This and the motor car campaign are the only definite programs, however.

August 5, 1926



Buy That Car Today!
First Day of Used Car Week, July 11-17

SAVE money by buying that motor car today. It's the first day of Used Car Week.

Hundreds of bargains in motor cars are advertised in the display and classified columns of this issue. Read the double-page spread of dealers' advertisements. Also read the "Automobile" columns of the Want Ad section.

As compared with new car prices these reductions represent savings of 15 to 75 per cent. Get the most for your motor car dollar by taking advantage of these special offerings.

A reasonable opportunity. Summertime is motor time. Picnics, outings, vacation—all trips—are more enjoyable in a motor car.

Get your car now! Read the display and classified advertisements! You're sure to find the car you want at the price you can afford to pay.

See the Two Pages of Used Car Bargains on Pages 8A and 9A

USED CAR WEEK, JULY 11-17



Magic of the automobile

is the distance from Kansas City to a crowded colosseum—a journey to be conscientiously before being undertaken.

Add to it the convenience of making short business trips in a single day; the comfort of being out of the crowds; the fresh air; the interesting places to be seen off the beaten path; the recreation it puts within reach of the whole family; the saving in time, effort, and money paid out for other means of transportation—and you have only partially summed up the magic a car has wrought in the lives of those who possess one.

Put this magic in your life. The cost can be regulated to suit your purse. Excellent service-giving cars are featured daily in the classified "Automobile" columns of The Star.

columns will discover just how there is the Big Market in automobiles.

KANSAS CITY STAR
for the People

One other point about "pushing" classified advertising of automobiles by The Kansas City Star:

Urging use of the columns, by the public, for the sale of their own used cars direct, removes many a used car from the field of trade-ins.

If the owner of an old car can get rid of the old car, himself, he is a potential cash buyer of a new car, or of a used car that has been conditioned by a dealer.

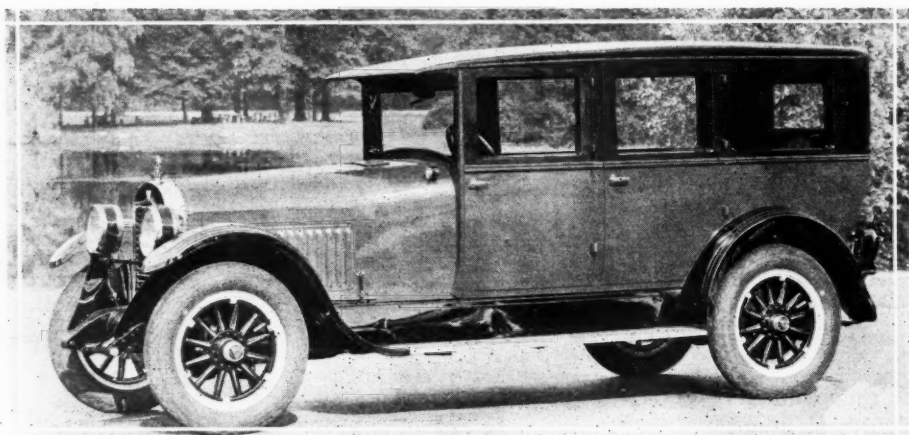
The more of these that can be disposed of direct, the easier is the used car situation for the dealer—always recognizing that "once an owner always an owner."

These "own advertisements" of the newspaper, therefore, which promote the use of the classified columns for the sale of his car by the owner, are as much a benefit to the trade as the advertisements which call attention to the dealers' advertisements. And the person who buys a car from an owner is himself, in nine cases out of ten, a prospect all the more ready to go to a dealer, eventually, if not at once!

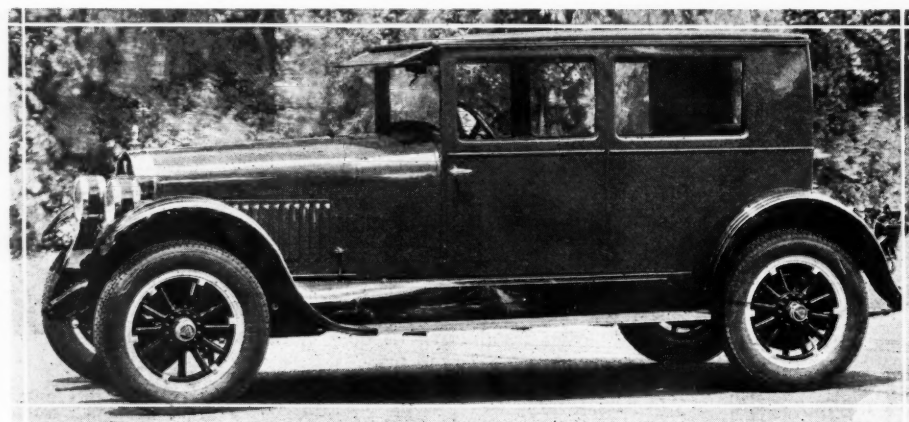
Defective Brakes on 22 Per Cent of Cars

Owners of high priced cars are more amenable to suggestions and corrections in regard to their cars than the owners of low priced cars, according to officials of the Cincinnati Automobile Club after a series of test of brakes. Owners of better classes of cars were found to be eager to undergo inspection and appreciated help of brake experts of the club, whereas those who avoided such tests were owners of cars of a cheap class, many such cars being old, worn out machines. The club inspected over 2,273 cars and 497 or about 22 per cent were found to have defective brakes.

New All Steel Body For



Finished in two-tone lacquer like the brougham the new 7 passenger sedan lists at \$1595, \$45 higher than the previous model



The new Hudson coach with steel body listing now at \$1195, \$100 higher than the previous coach model

THROUGH the adoption of colors and special lacquer finish, smooth body lines with rounded corners, and extensive nickel trim, the three body models forming the new Hudson line show a marked and striking improvement in general appearance. Coincident with the announcement of the new models, prices have been increased \$100 on both the coach and brougham, with the seven-passenger sedan listing \$45 higher. The current prices on these cars F. O. B. factory Detroit are: Coach, \$1,195; brougham, \$1,495, and sedan, \$1,595. In line with these increased prices, several accessories, including automatic windshield cleaner, motometer and stop light are offered in addition to the new improvements.

Of equal importance in the announcement of the new line is the adoption of all-steel construction for the coach body. The system of fabrication embodying riveted and bolted joints, piano type door hinges, narrow pillars and thin steel sills, and also the method of assembly is very similar to that employed on the new Essex coaches. The entire principle covering the construction and as-

sembly of the coach type all-steel bodies was described in MOTOR AGE of July 22nd when the announcement of the new Essex coach was made. Following the design of the Essex bodies, the appearance of the Hudson coach has been beautified by the use of cambered rear quarter sections and posts, a slightly rounded top and a single strip of moulding separating the upper structure from the remainder of the body. Likewise, the narrow steel sills forming the foundation of the body has allowed a reduction of 2 in. in the height of the body which adds materially to the lower appearance of the new cars.

Both the brougham and sedan models are of composite construction and employ aluminum panels over a selected ash frame as formerly. More structural changes have been made on the brougham than the sedan and chief among these have been the widening of the rear of the body to provide additional comfort for those occupying the rear seats, and the forming of the rear upper panels of aluminum replacing the previous fabric covered section. The front seat of the brougham which is of the bench type has

Special Lacquer Finish in Colors and Improved Mileage Also Distinguish Late Models

By L. S. GILLETTE

been made adjustable to provide comfortable driving positions for various drivers. The front edge of the seat frame is anchored to the body floor by two pivot brackets. On either side of the pivot pin an additional hole is provided to enable the entire seat to be moved backward or forward one inch, giving a total movement of 2 in. When the occasion arises the entire seat may be tilted forward.

Other changes in the interior have enabled 1 in. extra headroom to be gained. Similar to the style employed on the brougham the 7 passenger sedan model now has an integral sun visor formed by a continuation of the roof over the windshield.

All three cars now have the radiator shell nickeled-plated with the front and rear rims of the headlights nickeled to match. Cowl lights to correspond with the larger lights are employed on both 4-door bodies. As on previous models, the horizontal radiator shutters controlled from the instrument panel are retained. Large size motometers are standard equipment on all models while black enameled trunk racks are supplied on both the brougham and coach. Slight changes have been made in the layout of the instrument board and the switch for controlling the automatic windshield cleaner is now mounted on the board to the right of the instrument group.

Another improvement incorporated in the cars recently is a new steering wheel having the spokes and rim formed of walnut. The interior hardware is of improved design and one of the special features is a ring type combination door-pull and door latch handle.

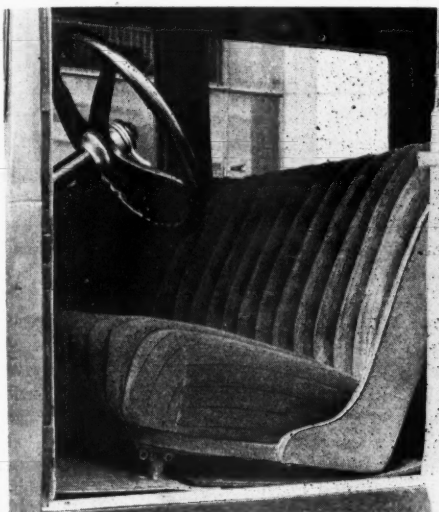
Striping in contrasting colors is used extensively on all three models. On both 4-door cars a two-tone effect having the darker shade above the beading is employed while the coach employs a single tone finish having the upper structure lacquered in the same color as the remainder of the body. Color effects, upholstery, and equipment of the three cars are as follows:

COACH: Entire body in Nipponese blue lacquer relieved with a flaming carmine striping on each side of the beading and on the wheels. Upholstery is Woolen Whipcord. Equipment in ad-

Hudson Coach

dition to that already referred to includes rear view mirror, cowl ventilator and sun visor.

BROUGHAM: Upperstructure in Wellington gray, below the belt Kensington



This shows clearly the adjustable feature of the bench type front seats in the brougham model

gray. Striping in French gray round beading and on wheels. Upholstery is a special mohair. Equipment includes rear silk curtain, dome light, cowl ventilator, rear view mirror and integral sun visor.

SEDAN: Upper panels in Alpinstock green with Panama green below the belt.

The brougham listing at \$1495. This model is finished in two-tones of lacquer. The front seat is adjustable providing a maximum of 2 in. movement



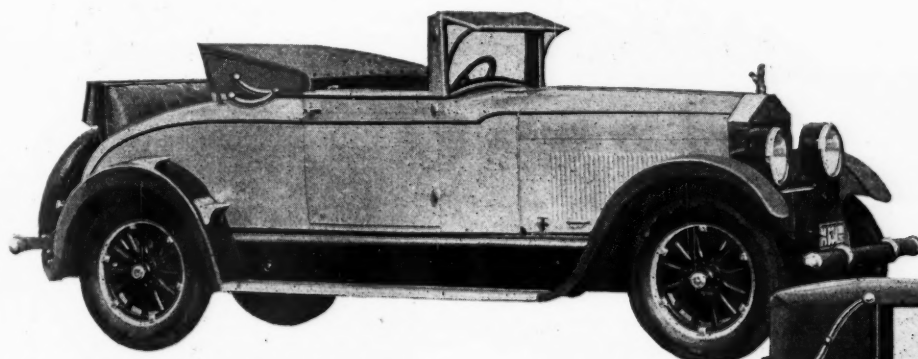
The moulding is in Ferric green with Virginia cream striping. Upholstery is similar to that on the brougham, being a special mohair. Standard equipment includes arm rests for those in the rear seats, three silk shades, dome light, rear view mirror, cowl ventilator and integral windshield.

As already mentioned, automatic windshield cleaner, motometer, nicked radiators and headlight rims, stop lights are standard on all models.

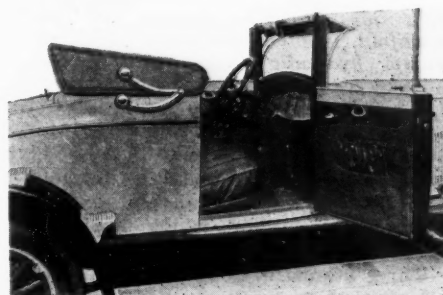
Two minor mechanical improvements have been made on the Hudson chassis. By redesigning the intake manifold to

provide increased turbulence and changes in the carburetor to make for better atomization, the fuel economy has been increased by at least two miles per gallon. A new type of vacuum tank having a special sump for sediment is provided on the latest models. In the lower part of the tank, the gasoline line leading to the carburetor extends upwards into tank approximately 1 in. This arrangement enables the water and sediment to settle in the large sump of the tank and prevents the foreign matter entering the fuel line. A petcock is provided at the lowest point to drain off the sediment.

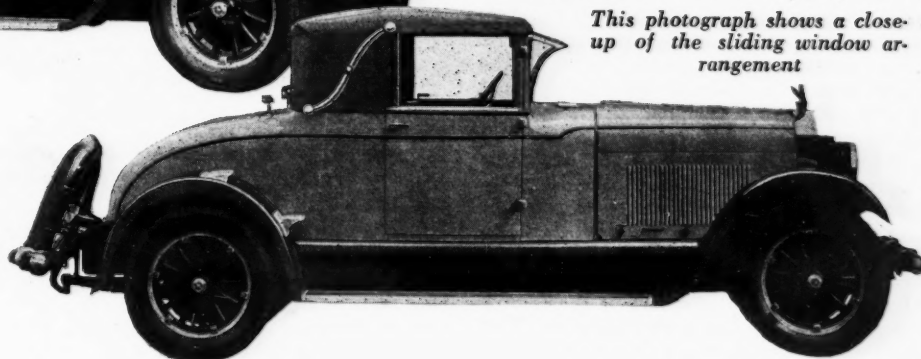
New Elcar Roadster with Convertible Top



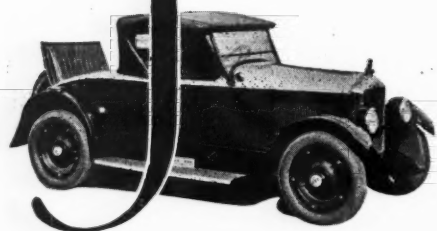
This landau roadster is the latest addition to the line of the Elcar Motor Company, Elkart, Ind. The photographs show the roadster body on the eight cylinder chassis. The same body may be had on the six. The eight lists at \$2295 f.o.b. Elkart, and the six roadster at \$1675. One of the photographs herewith reveals the new roadster with top down. Another shows how it has been converted into a closed coupe by raising the top and sliding the glass windows up out of the door panels.



This photograph shows a close-up of the sliding window arrangement



Jubilee Moon



New Model of European-American Design Incorporates Light Weight Six Cylinder Engine and Hydraulic Brakes in Roadster, Phaeton and Coach at \$995

BIG car design, comfort and road ability built into a medium priced car of moderate size designates in a general way the new Jubilee Moon Six-Sixty, a car of the European-American type that commemorates the fact that the Moon Motor Car Co. has been building motor cars for twenty years.

Ease of handling, power, flexibility, comfort and safety are incorporated in the design of the chassis which includes

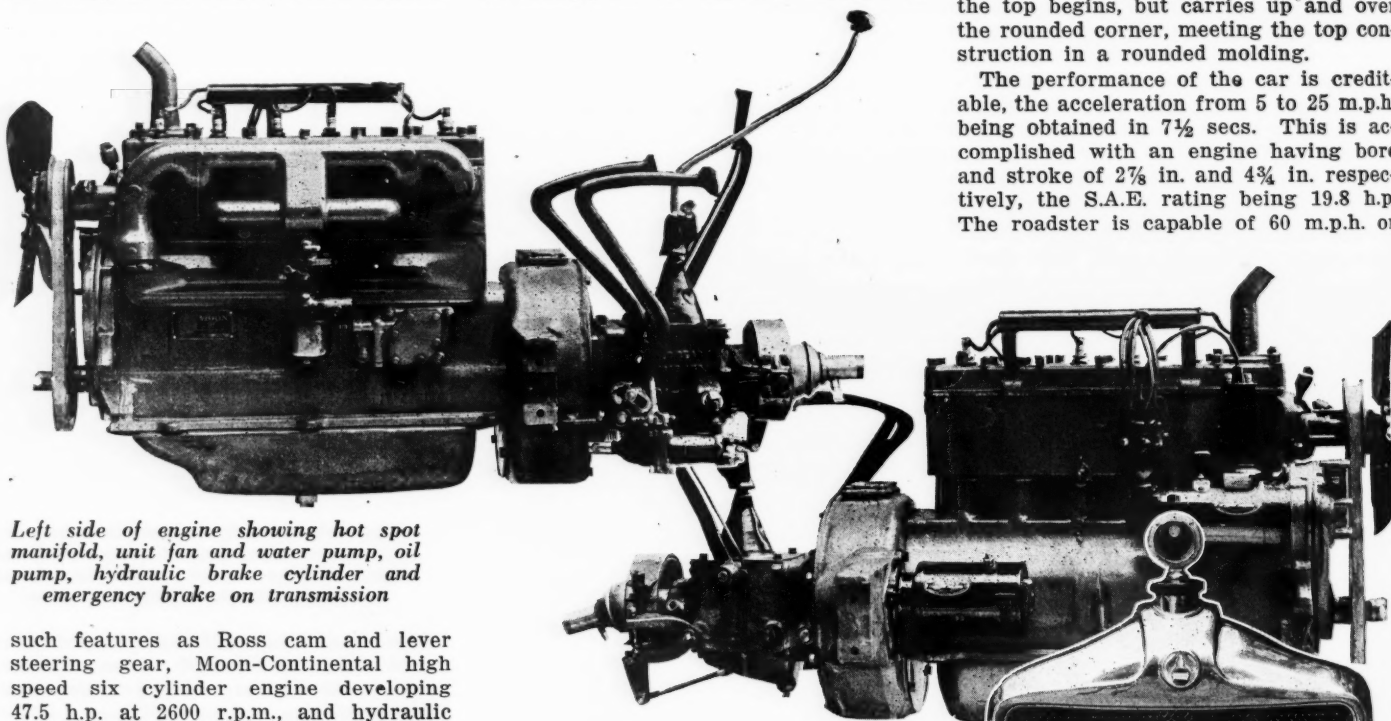
back to the convex curve at the cowl. The appearance of power and stamina is further carried out by the high hood which carries back to overlap the body and dash by about three inches, thus giving ample leg room in the front seat without detracting from the general appearance.

Reduction in weight of the body and chassis to get snappy performance has been obtained by such items as the use of five ply fir for the dash instead of

and two points of cross support effected by the four point suspension used for the engine. The frame side rails are six inches deep, have $1\frac{1}{4}$ in. flanges and are made of $\frac{1}{2}$ in. stock.

Bodies of the enclosed type are of composite steel and wood construction, giving the advantages of both types and providing narrow corner posts to give the maximum possible visibility and safety. In the coach the metal at the rear does not stop where the curve at the top begins, but carries up and over the rounded corner, meeting the top construction in a rounded molding.

The performance of the car is creditable, the acceleration from 5 to 25 m.p.h. being obtained in $7\frac{1}{2}$ secs. This is accomplished with an engine having bore and stroke of $2\frac{1}{8}$ in. and $4\frac{1}{4}$ in. respectively, the S.A.E. rating being 19.8 h.p. The roadster is capable of 60 m.p.h. or



Left side of engine showing hot spot manifold, unit fan and water pump, oil pump, hydraulic brake cylinder and emergency brake on transmission

such features as Ross cam and lever steering gear, Moon-Continental high speed six cylinder engine developing 47.5 h.p. at 2600 r.p.m., and hydraulic four wheel brakes which make high speed possible with maximum safety.

Three standard models are announced, all at \$995 f.o.b. St. Louis. These are the roadster, the phaeton and the two door coach, each seating five passengers. The roadster accommodates three in the front seat and two in the rumble seat which is easily reached by means of aluminum steps.

The attractive nature of the design is appreciated by a glance at the illustrations. The radiator is new and reminds one somewhat of the radiator used on the Diana. Between the rounded corners and the raised center on which the filler cap is mounted there is a concave surface to which the hood conforms. The hood then carries these lines gradually

Right side of engine showing starter, generator and ignition with automatic advance. The bayonet type oil gage is at the center of the crankcase

The radiator of the Six-Sixty gives the new Moon an appearance that suggests the Diana design

solid oak, also the use of steel stampings in rear axle brake parts and spring seats to replace the heavier malleable castings sometimes used.

The care given to the various construction details is seen in the frame which has, in effect, seven cross members, a tubular member at the rear, over and in back of the gasoline tank, four gusseted members of channel section

Six-Sixty

By A. H. PACKER

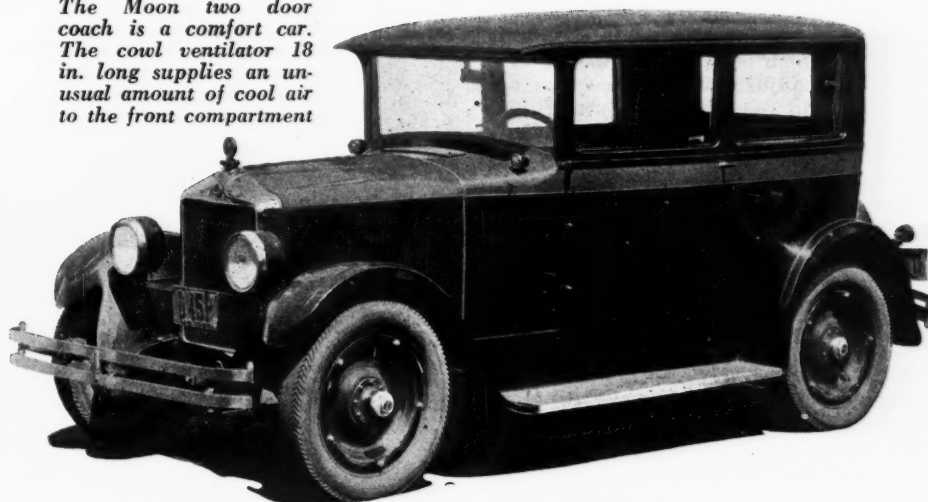


Side of Roadster showing graceful lines and European small car appearance

Major Specifications of Moon Six-Sixty

| | |
|-------------------------------|-------------------------------|
| Models..... | Roadster, Coach and Phaeton |
| Price, all models..... | \$995 |
| Wheelbase..... | 110 in. |
| Wheels..... | Wood |
| Tires..... | Firestone balloon, 29 by 4.75 |
| Finish..... | Two tone combinations |
| Engine make..... | Continental |
| Cylinders..... | Six |
| Bore and stroke..... | 2 7/8 by 4 3/4 |
| Rated H.P. (N. A. C. C.)..... | 19.8 |
| Developed H.P. at 2600..... | 47.5 |
| Piston..... | C. I. |
| Main bearings..... | Four |
| Camshaft drive..... | Chain |
| Oiling system..... | Pressure |
| Type pump..... | Gear |
| Cooling system..... | Pump |
| Carburetor..... | Carter |
| Electrical system..... | Remy and Delco |
| Clutch..... | Borg and Beck |
| Axles..... | Columbia |
| Differential ratio..... | 4.8 |
| Brakes, service..... | Four wheel hydraulic |
| Brake, emergency..... | On transmission |
| Steering gear..... | Ross cam and lever |
| Transmission..... | Warner |

The Moon two door coach is a comfort car. The cowl ventilator 18 in. long supplies an unusual amount of cool air to the front compartment



The springs used are 2 in. by 36 in. long in front, while the rear springs are 2 in. wide and 54 in. long, giving a total spring length of over 80 per cent of the wheel base. The wheelbase is 110 in.

The hill climbing ability of this new Moon car is especially interesting. The pet test in St. Louis is up Calvary Hill which starts up steeply at right angles to a car line paved with rough cobble stones. There is also quite a bump at the bottom so that it is nearly out of the question to get much of a start. At the time this test was made there were two cars on the hill, one apparently stuck and the other laboring. The Jubilee Moon sedan swung into the turn, went up on high with three passengers, passing the other two cars and reached the top going approximately 15 m.p.h. The car was then turned around and went down again, passing the two cars, still laboring painfully upward.

The engine is built by Continental and is of the "L" head type with detachable

cylinder head. Special light weight cast iron pistons are used, these being balanced in sets of six, to 1/2 oz. The piston displacement is 185 cu. in. and the compression ratio 4.78 to 1. The crankcase is integral with the cylinder block and extends down to a point 2 1/2 in. below the center of the crankshaft to give stiffness to the engine construction.

The crankshaft has four main bearings, these being of the bronze back replaceable type. The diameter in each case is 2 1/8 in. while lengths from front to rear are 1 1/8 in., 1 3/8 in., 1 1/8 in. and 1 3/8 in. Connecting rod bearings are 2 in. in diameter with a length of 1 1/2 in. while the piston pin bearing in the upper end of the rod is 47/64 in. by 1 1/8 in. The piston pin is made a snug push fit in the piston boss, a lock ring being also used in the boss to prevent cylinder wall scoring in case pin should at any time work loose.

The cam shaft is driven by Morse chain which also serves to drive the gen-

better and in a demonstration given to a representative of MOTOR AGE a two door sedan readily did 58 m.p.h. and showed a comfortable and safe cruising speed in the vicinity of 45 m.p.h. The performance may be partially attributed to the high engine torque obtained, it being 117 lb. ft. at 850 r.p.m.

In driving over rough roads the use of long flexible springs was appreciated, for in even the worst stretches there was hardly a bump that could be said to cause discomfort to the passengers, while the 29 by 4.75 balloon tires seemed to entirely eliminate the cobble stones encountered along the car line where some of the tests were made.

erator. Four camshaft bearings are used, the diameters being reduced from front to rear to facilitate withdrawing shaft from the front. The bearing diameters are $1\frac{1}{8}$ in., $1\frac{1}{4}$ in., $1\frac{3}{4}$ in., and $1\frac{1}{2}$ in. The bearing lengths from front to rear are $1\frac{1}{8}$ in., $\frac{3}{4}$ in., $\frac{3}{4}$ in. and $1\frac{3}{4}$ in.

Valves are of alloy steel, have a lift of $\frac{1}{8}$ in. and a diameter of $1\frac{1}{8}$ for the intake and $1\frac{1}{4}$ for the exhaust. Tappets are of the round nose type and are located in tappet guides which are rigidly fastened to the cylinder casting by two large bolts.

Lubrication is provided by a gear type pump located at the left side of the engine and driven by bevel gears from the camshaft. This pump forces oil to the main bearings, while drilled passages through the crankshaft take oil to the connecting rods. There is also positive oil feed to the front end chain, while splash takes care of pistons, piston pins and camshaft bearings. A pressure relief valve is incorporated which is set to give 30 lbs. pressure at 1500 r.p.m.

In supplying oil to the piston pins use is made of grooves around the bushing in the upper end of the connecting rod, the oil coming to the pin by drip from the piston head. Thus oil enters at the low pressure side of the bearing.

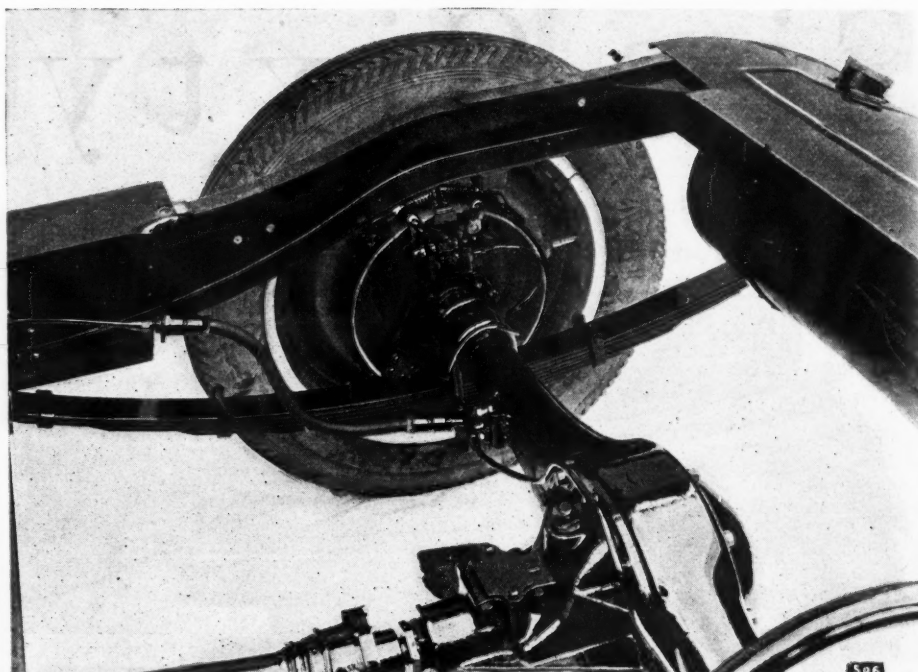
The water pump and fan are built in one unit which is driven by means of a "V" belt. Adjustable ball bearings are provided for the mounting which provides a rigid construction which does not whip out water pump bushing or packing.

The valves are timed with intake opening 4 degrees past top dead center and closing 46 degrees past bottom dead center. The exhaust opens 41 degrees before bottom dead center and closes 1 degree past top dead center. Valve springs are made of specially selected electric furnace valve spring wire, the design being such as to practically eliminate tossing and clattering of valves at high speed.

Each piston uses three rings, the lower one being a $\frac{1}{8}$ in. oil regulating ring, while the other two are plain. The clutch used is a 9 in. push type Borg and Beck while the transmission is a Warner Gear Co. T68J mounted in unit with the engine. Columbia axles are used front and rear. Hotchkiss drive is employed, both the driving and torque forces being transmitted through the rear springs.

Other equipment and units employed include Detroit Steel Products springs, Mechanics universal joints, International Steel Stamping Co. muffler, Stewart Warner speedometer, Alemite lubrication system, Carter carburetor, Fedders radiator, Champion spark plugs, John W. Brown head lamps, U. S. L. battery, Remy starter, generator and ignition coil with Delco distributor having automatic advance and an electrically operated gasoline gage.

The transmission is supplied with a positive Johnson type lock. There are three speeds forward and one reverse, the ratios being 3.07 in low, 1.77 in second, 1 to 1 in direct and 4.1 to 1 in

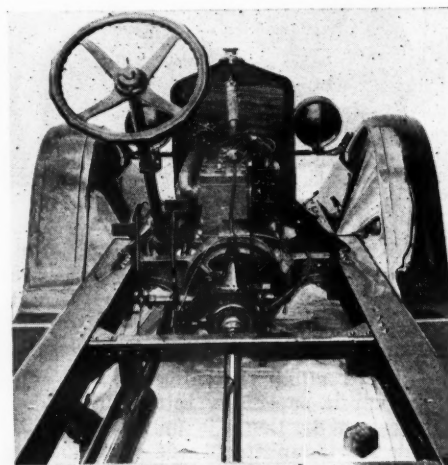


Rear of chassis showing connections to hydraulic brakes. The dust apron over gasoline tank is also shown

reverse. Annular ball bearings are used on the main shaft. The emergency brake operates at the rear of the transmission, the brake band being 2 in. wide and 6 in. in diameter. The hydraulic service brakes operate on bands $1\frac{3}{4}$ in. wide and 12 in. in diameter.

Accessibility

In the engine construction, accessibility to facilitate service work has been attained by making it possible to remove



Details of front portion of chassis showing rugged frame and cross member construction

practically any unit without disturbing others. The starter is thus easily removed without interference from adjacent units. The oil pan comes off easily and the front chain cover may be removed without disturbing the engine mounting. The cylinder head is removable and pistons are taken out from below. The oil pump is removed by disconnecting the line to the pressure gage and taking off four nuts which hold the

assembly to the crankcase. No other leads need disconnecting as connection to the suction and pressure leads is made by means of the gasket making oil connection to ducts in the crankcase. The tappet assemblies come out as units which makes replacement very simple. The engine weight is 460 lbs., or a little less than 10 lbs. per delivered horse power.

Model Specifications

Wood wheels are regular on the 5 passenger phaeton, together with 29 by 4.75 Firestone balloon tires. Upholstery is tan Spanish leather, the finish being two tone gray combination with black molding and cream stripe. Besides the regular headlamps with bright filaments and resistance dimming, side lights are provided for use when parking or when driving on well lighted streets.

The two door standard coach is also provided with wood wheels and the same size balloon tires. Interiors are trimmed in velour plush. The coach is also equipped with an automatic windshield wiper. The same wheels and tires are used in the roadster which is trimmed in steel gray Morocco grain leather. The top is black with black bow sockets. Side lights are also provided on the roadster.

Bearing Size Reference Book

United Motors Service of Detroit has published a catalog of ball and roller bearings used on cars from 1920 to 1926. In using this catalog it is only necessary to refer to the car which is listed alphabetically, then refer to the part, as for example, fan and water pump shaft and the make and style of bearing is then given. This catalog should be of value to anyone engaged in servicing automobiles.

New AC Oil Filter Has Easily Replaceable Cleaning Unit

SEVERAL novel features are incorporated in the new A C oil filter included in the new models announced recently by the division of the General Motors Corporation and made by the A C Spark Plug Company. The filtering element proper is a rectangular canton flannel bag which is rolled around itself to form a cylinder and is sewed to form several channels. As delivered to the user, the entire filtering element is enclosed in a sealed can and replacement at the end of the filter bag's usefulness is made by removing the entire can from the die-cast connection at the top. The clamps which attach the filter to the car are arranged to facilitate this operation.

Connection to the filter is made by copper tubing from some portion of the main oil line. At the junction between the engine oil line and the copper tubing, a choke orifice is placed which is ordinarily made by a No. 52 drill. Even with this small orifice, approximately 15 gals. of oil per hour pass through the filter. Until the filter bag becomes badly clogged through long service, the pressure set up by the filter bag is one pound.

The filter bag above is made up with the nap inside where it is particularly effective in removing particles of dirt, carbon or chips before they lodge in the fabric. Microscopic examinations of films of filtered oil show practically no presence of solid foreign matter where unfiltered oil after a relatively short run will contain from 4 to 6 per cent by volume of solids. Installation of the filter permits using the crankcase oil several times as long as it can be used unfiltered.

As illustrated, the filter body is shaped cylindrically and is attached to the dash usually by the clamp brackets which are included. Two sizes of filter are in production at present. The larger is 4 in. diameter and has a filter bag area of 600 sq. in., while the smaller is 3½ in. diameter with about three-quarters of the filtering area of the larger size.

Before assembly the filtering element is a long rectangular closed bag with a metallic connection sewn and clamped into the upper corner of the inner end as the bag is rolled up on itself. Seven horizontal channels are formed by parallel seams in the bag. These stop somewhat short of the inner end of the bag so that a header or manifold is formed below the metallic intake connection. The bag is enclosed in a light sheet metal frame work which includes a complete cylinder of fine mesh wire screen. This unit is enclosed within a metal can which is fully sealed with outlets at the top for connection with a die cast check



AC oil filter showing sealed enclosure which is replaced as a unit. Cut-away portion shows tubular channels stitched into canton flannel filtering bag and screen enclosure.

and by-pass assembly. The filter bag assembly with its screen enclosure is somewhat smaller in diameter than the inside of the can so as to allow space for the filtered oil to move up and out at the top.

This sealed can construction was adopted after experiment with the flanged type of enclosure in which the valve and connection assembly at the top was incorporated in a die cast cover. However, the type adopted is cheaper to manufacture, and cleaner to handle for replacement purposes and eliminates the flanged joint of rather large diameter with its screws and possibility of leakage. With this type, three small cap screws are removed at the top, the clamp bracket screws are backed off and the entire can is removed to be replaced by a new unit.

Oil from the engine line is delivered at the connection at the right at the top and passes down into the interior of the filter bag. Filtered oil returns to the top

and passes back to the crankcase through the connection at the right. When the filter is put into service originally, the filtering action occurs in the convolutions near the center. These are opened up by the oil pressure into semi-tubular shape. As the smaller convolutions become congested they tend to straighten out and enlarge and permit free flow to the larger diameter convolutions. It should be understood that the filter bag is packed loosely within the screen enclosure.

In case the oil delivery is greater than the filter can handle or its capacity is reduced due to long service, excess oil passes through a spring actuated by-pass valve in the die cast assembly. Normally, the spring pressure keeps this valve closed and causes all incoming oil to flow through the filter but excessive pressure opens the valve and delivers the excess volume directly to the outlet line. A gravity ball check valve in the outlet line prevents any possibility of reversing the direction of flow through the filter bag. A small test valve in the die cast assembly allows the flow of oil out of the filter to be checked. This valve also is a check on the operation of the engine oil pump.

Factory installations of the filter are connected to any suitable point in the engine oil line. Where the filter is sold as an accessory to the car owner, the simplest form of connection is at the oil gauge line. A tee connection, including the choke, is interposed in the copper tube line to the gauge and a return from the filter to the crankcase is installed. In general, this filter connection does not disturb the oil pressure conditions within the engine to any marked degree. Ordinarily the pressure of the oil line is reduced by less than 10 per cent where the filter is applied as an accessory and in some cases this reduction can be corrected by adjusting the pressure relief valve on the engine.

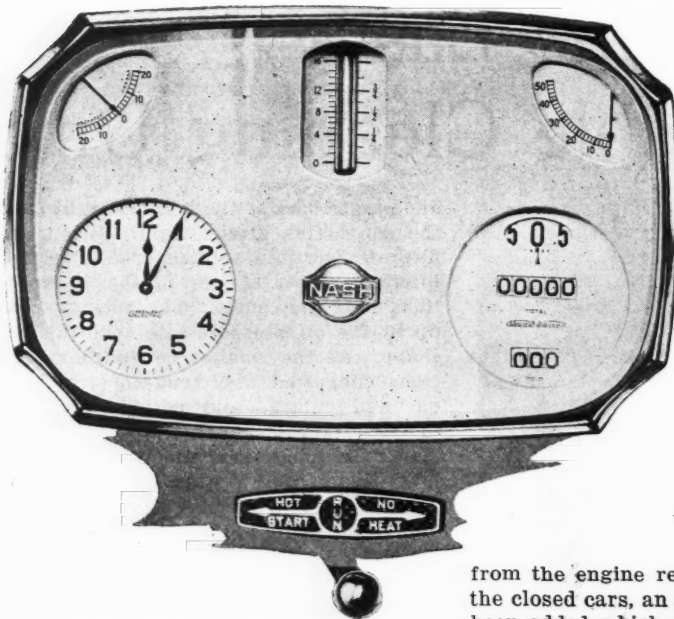
To Study Cost of Horse and Tractor in Threshing

Cost of harvesting by horses and tractors will be worked out in comparison with the operation of binders, headers, and special machines and the total cost of harvesting and threshing each crop for different yields and acreages and sizes of machines will be ascertained by the Bureau of Plant Industry, Agricultural Economics and Public Roads in co-operation with State agriculture agencies, it is announced by the Department of Agriculture. The investigation is to begin near Enid, Oklahoma, and will be carried on in the Panhandle of Texas, one area in Kansas, in western Nebraska and in the Judith Basin section of Montana.

Mechanical

*Advanced Six Has Oil Agitator,
Thermostat, Auxiliary Breather and
Other Improvements—Light
Six Has New Sedan Body*

By A. H. PACKER



*Attractive Instrument Board used on
Nash Advanced Six*

SOME radical innovations have been made in the Nash Advanced Six, while an entirely new sedan body is being used on the Light Six. The mechanical changes on the Advanced Six include an "agitator" at the oil pump screen, a thermostat in the cooling system, an auxiliary breather to keep fumes out of the closed cars, a new type muffler in which the gases go to the outer shell first, a new winged type radiator cap and instrument panel of attractive design.

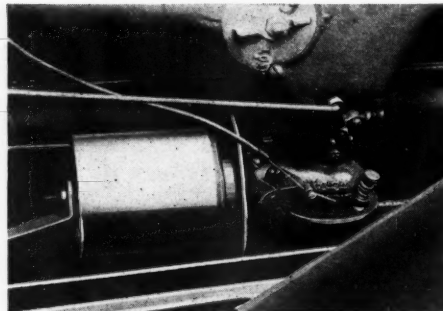
Those who have studied the problem of proper lubrication in winter know that it is practically impossible to prevent some condensation taking place in the crankcase, one reason for this being that the products of combustion contain water vapor. Water and oil combined with dirt also have the property of emulsifying or forming a jelly-like mass which is anything but suitable for lubricating the engine. The greatest trouble, when oil is not frequently changed, is caused at the oil pump where this emulsion clogs the screen so as to prevent free flow. This trouble is experienced with the best of oils and the best of engines.

It is for this reason that the "agitator" has been added, this being a small two blade rotor, operating on a shaft which extends through the screen from the pump, in order to keep the oil in the vicinity of the screen in motion and prevent the formation of emulsion at this point.

The thermostat is another added feature especially designed to improve winter operation. It is located at the outlet which carries the water to the upper part of the radiator. A damper in the device practically closes the outlet until the best operating temperature of approximately 190 degrees Fahr. is obtained. At this temperature, the thermostat opens the damper so as to give maximum water circulation.

To prevent any trace of exhaust gas

from the engine reaching the interior of the closed cars, an auxiliary breather has been added which extends below the car. Exhaust manifolds have from time to



*This illustration shows the Air Cleaner
in use on New Nash Light Six*

time been blamed and leaks sought when the real trouble was due to fumes being expelled from the breather pipe. Even with pistons and rings in ideal condition it is conceivable that the explosion pressure may force a slight amount of gas past the pistons and into the crankcase and it is to prevent this gas reaching the car interior, that the extra breather has been incorporated. The atmosphere in the interior of the car is further protected by new type overlapping floor boards.

The muffler is of improved design in which the hot exhaust gases go first to the outer shell where they are cooled and contracted. The volume of gas is thereby reduced before entering the inside manifold. This gives a smaller volume of gas to be muffled, increases efficiency and gives a more quietly operating engine.

New two filament head lamps are employed, a parabeam reflector being used. These lamps make it possible to drive with bright lights and by a simple movement of the switch lever on the steering wheel, to direct the rays downward when passing another car. This lever is the lower one, there being two others for spark and throttle at the upper portion of the new type control at the center of the steering wheel. The left position

Nash Celebrates Tenth Anniversary

Coincident with the introduction of the newly refined Advanced Six and Light Six Nash cars, Nash dealers throughout the country are staging impressive displays in recognition of the tenth anniversary of the founding of the Nash Motors Co. The rapid and constant progress of the Nash company is shown by the record for the first six months of this year when 78,133 Nash cars were sold as compared with total sales for the entire year 1925 of 96,121 cars. The 1925 record, however, was a gain of 80 per cent over 1924.

of the lighting switch lever turns the lamps off, the center position gives the low beam for passing other cars while the right hand position gives the high



*"Agitator" or small blade Rotor, used
for the purpose of keeping oil in the
vicinity of the oil pump screen in
motion*

light beam for normal high speed night driving. The ignition switch is separate at the left of the dash.

With this arrangement for the light controls the actual switch is mounted at the base of the steering column, and

Changes in 1927 Nash



The above illustration shows the Nash Advanced Six Sedan

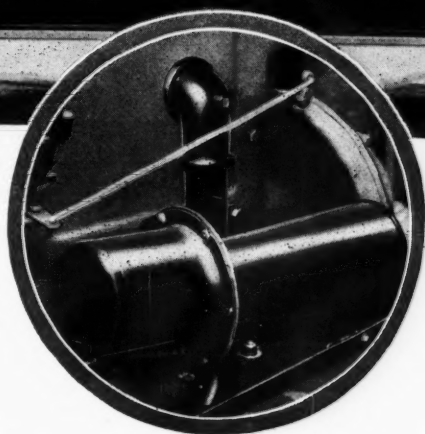
along with this change, armour covered wire has been adopted as standard with the exception of the high tension wiring.

The car interior appearance is enhanced by the new instrument panel which carries the ammeter at the upper left corner, with the oil pressure gage at the upper right corner. In the center is the gasoline gage which operates on the hydrostatic principle. At the lower left is a Greenleaf electric clock and at the right the Stewart Warner speedometer. New style vanity and smoking sets of attractive appearance are now included in models 264 and 268 while model 265 has a combination set. The smoking set includes a cigar lighter which operates with current from the battery.

Previous reference has been made to a change in the body of the Light Six Sedan. This now uses the same substantial wood frame construction which is found on the other Nash cars in the special and Advanced series, in spite of the fact that this type costs more to build than the body previously used. The leg room in the rear seat of this model has been increased by three inches and the window shapes have been changed to give a more pleasing appearance and to conform to the full rounded lines and sweeping curves of the new body.

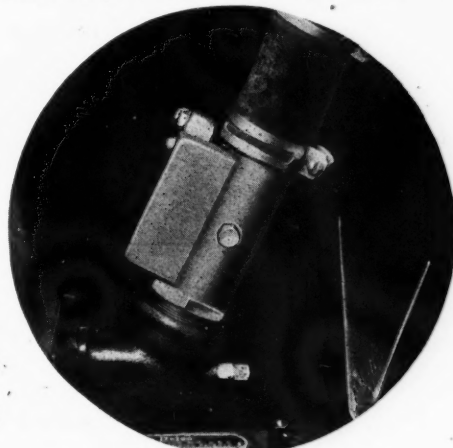
The doors are heavier than before and operate more quietly. Weather strips are provided to insure tightness and freedom from draughts.

In the mechanical features of the chassis a few minor changes have been made. An air cleaner is now used, this being mounted horizontally on cars having left hand drive, while right hand drive cars for export have the cleaner mounted vertically. An oil purifier has also been added to insure long life to the operating



Auxiliary Breather on Nash Advanced Six

parts of the engine. The fan and generator pulleys which operate by means of two Vee belts are now made of cast iron, accurately machined to get the exact



Thermostat used on Advanced Six, designed to improve Winter operation

angle of the Vee required by the belts.

Like the Advanced series, the Light Six also has a newly designed instrument panel. This is substantially square with slightly rounded lower portion and contains three units. The center unit incorporates the ammeter, oil pressure

gage and the gasoline gage. The speedometer is at the right while the ignition and lighting switch is at the left. The choke operating button is also built in with the ignition and lighting switch. This switch operates with only one lever. Turned to the left for parking it gives cowl and tail lights. The center is the off position. The first notch to the right gives ignition, the next notch gives ignition and dim lights while the third position to the right gives ignition and bright lights. A feature of this construction is that it is impossible to leave the bright head lights on at the curb and run down the battery when the ignition is switched off to stop the engine.

The Light Six as well as the Advanced series now has a silver finished radiator cap on which a winged ornament is mounted. This is so attached that it may be removed for installation of a Moto-meter if desired.

Offer First 100 Buyers Free Service for Year

The White Auto Company, of Los Angeles, Southern California Auburn distributors, recently advertised the offer of free service for a period of a full year to the first 100 buyers of new Auburn cars. The purchaser was given a certificate of membership in the Auburn Booster Club, which entitled him to the gratis service. The company agrees to keep the cars in first-class operating condition for twelve months from date of purchase, without cost except for gasoline, lubricants and tires.

Improvements in 1927 Davis

THE Davis Motor Car Company of Richmond, Ind., announces the development of two chassis for the 1927 season. The large six designated as model 92-27, and the light six, model 93-27, show a number of interesting features, although there is nothing in their make-up that has not been previously tried and proved practical.

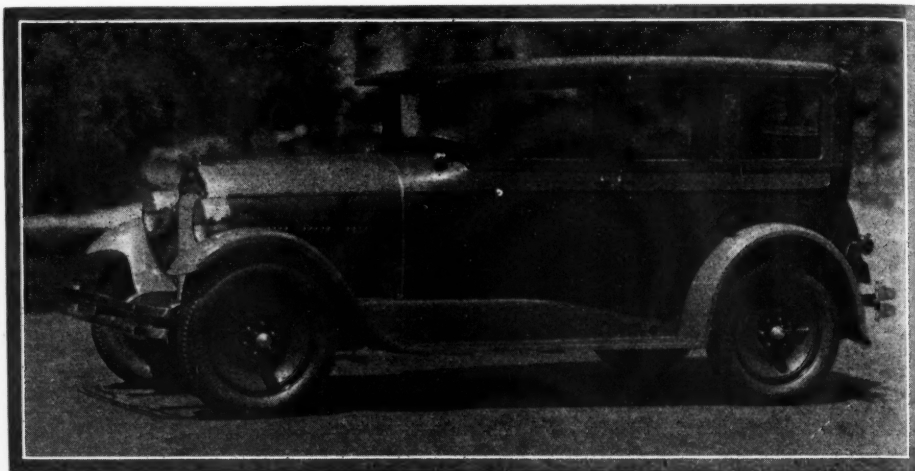
The Imperial sedan on the 92-27 chassis lists at \$1,795 F. O. B. Richmond. The light six sedan lists at \$1,285.

Each of these models is powered with a six-cylinder Continental Red Seal engine with full pressure lubrication. The large six engine has a bore and stroke of $3\frac{1}{2}$ in. by $4\frac{5}{8}$ in., and develops 68 horse-power, and is capable of driving the car at 70 to 75 miles an hour. A Lancaster dampener produces extremely smooth action. The light six engine has a bore and stroke of $2\frac{3}{4}$ in. by $4\frac{1}{4}$ in., and develops 48 horse-power. This motor is equipped with a Tillotson carburetor with an economizer that gives the car very good gasoline mileage. Stromberg carburetors are used on the larger jobs.

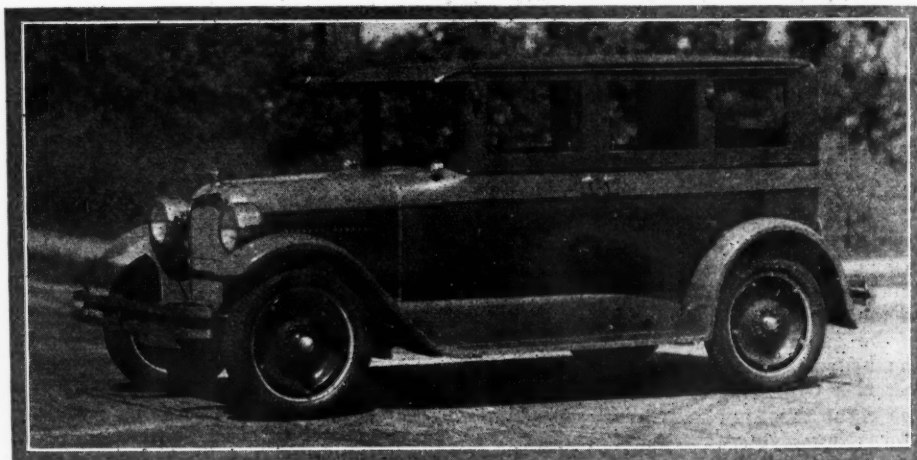
In both chassis the power of the motor is carried through Warner Transmissions equipped with Johnson Locks. Peters propeller shafts and universals complete the drive to the rear axle. The latter is of three quarter floating construction and is equipped with Timken bearings throughout.

Cellular honey comb radiator, large drum type twin beam headlights, cowl lights, Delco electrical equipment, automatic windshield wiper, one piece clear vision ventilating windshield, Lockheed four wheel brakes, Klaxon horn and stop light indicate the quality and completeness of these models.

Both models are available in harmonious shades of Duco combinations of Plymouth blue and Rolls-Royce blue, or Biscay green and Ardsley green are avail-



Davis 92-27 Imperial Sedan Listing at \$1,795.00



The Davis Model 93-27 Sedan, \$1,285.00

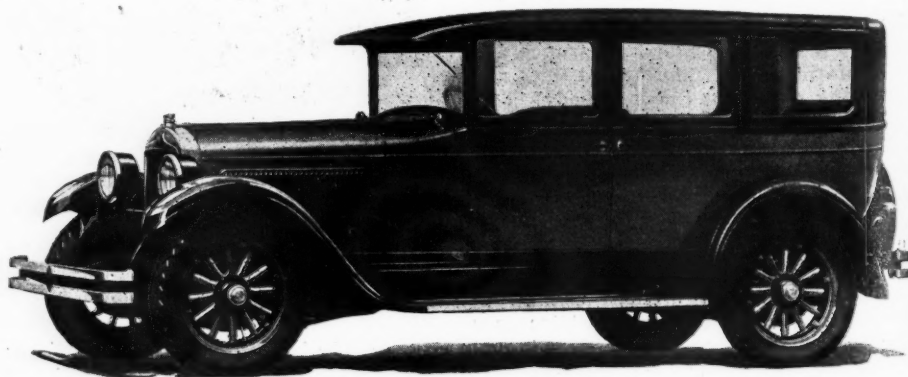
able. The fenders are also finished in Duco to match the panels.

The light six is upholstered in Royal Cord, with button tufted cushions and backs over curled hair pads mounted on oil-tempered springs. Pockets are in all doors. Foot hassocks, lounge pillows,

corded silk hand grips, and adjustable shades for rear, and rear quarter windows add to the comfort of the passengers. The large six is upholstered in silk mohair, and nothing has been spared to make it both comfortable and attractive.

New Seven Passenger Hupp Sedan

Hupp Motor Car Corporation's new seven-passenger sedan on eight-cylinder chassis which lists at \$2,495 F. O. B. Detroit. This is the first seven-passenger closed car included in the Hupp line for several years. The model will be furnished to the buyer with an adjustable glass partition so it may be used as a sedan-limousine. Equipped thus to provide for driving by either owner or chauffeur there is an extra charge of \$100.



Parking at the General Electric



2000 AUTOMOBILES are parked daily by G. E. employees and these two pictures show only part of the space required



STEWART MacDONALD, President of the Moon Motor Car Co. and Diana Motors Co., has just received a new statue of Diana which he appears to like



PUBLICITY AND HONEYMOONING don't usually go together but Mr. and Mrs. Tomlinson, just married, drove a Velie Club Phaeton across the continent advertising Philadelphia Sesqui-Centennial. Here they are shown surrounded by the youngsters of "Our Gang" while visiting the Hal Roach Studios at Los Angeles

A RUNNING BOARD LIMOUSINE equipped with electric lights and storm curtains, as shown in the picture, should increase travel among canines. "Cactus" owned by Bill Sykes of Hollywood, thinks it's pretty fine and has already crossed the continent twice

Photo from All-Year Club of Southern California

August 5, 1926

NEW ITEMS FOR CAR OWNERS

Noisom Auto Compass

INDICATING at a glance the direction of travel as well as keeping the driver straight as to the magnetic north the Auto Noisom Compass is recommended by its makers as an item of real value to the motorist. The compass is a product of the Noisom Auto Compass, Inc., 991-997 Main Street, Buffalo, N. Y. This compass is intended for installation under the top or ceiling of the car and should be installed with the letter "N" on the dial pointed toward the center of the windshield. When traveling north the white point of the needle thus is over the "N" on the dial. Then, for instance should the car be headed east the white point, while pointing to the magnetic north, will hover over the "E" on the dial. The white point of the needle always indicates the direction of travel.

This compass should be installed 27 to 30 inches back from the windshield or at some other point where the needle will not be affected by electro-magnetic influences in front of the car. The compass sells at retail for \$3. For \$2 extra a dash reflector is furnished. The company describes the reflector as a convenience rather than a necessity.

Gemco Round Bar Bumpers

GEMCO Manufacturing Company, Milwaukee, Wis., now is providing the trade with its Gemco Round Bar Bumpers in both single and double bar designs. In addition to the bumpers the company is making Gemco Double Round Bar Wings for the rear of the car which are made to harmonize with either the single or double bar front bumper. The single bar bumper is massive in appearance. Its special spring steel upright loops not only give resiliency but ward off other bumpers with which they come in contact. The ends turn in slightly and are covered with nickel caps. The standard bars are furnished in black with nickel end caps and ornamental clamps. Brackets are fastened directly to the upright loops without the use of a bracket clamp plate.



Noisom Auto Compass

The double bar bumpers are held together with special clamps. The spring steel rear member looped at the ends offers resiliency as well as additional protection. The standard bumper is furnished in glossy black baked enamel. The heavy ends caps and clamps are finished in nickel.

The single round bar bumper, black, three inch, lists at \$27 complete. The double bar bumpers, black, two inch, list at \$30. The double round bar wings, 2 inch, black, list complete \$30.

Manley-Friend Auto Washer

AN automobile washing outfit formerly known as the Friend Spraway Auto Washer and made by the Friend Manufacturing Company, Gasport, N. Y., now is being furnished to the trade by the Manley Manufacturing Company, York, Pa., under the name of the Manley-Friend Auto Washer. This washer was described with illustration in the May 20 issue of MOTOR AGE. The outfit complete without motor is catalogued No. 600 and priced at \$400.

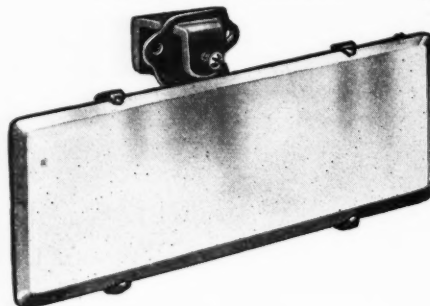
New Bull Dog Display

THE W. H. Thomas Company, Spencer, Ia.—makers of the Bull Dog Foot Accelerator for Fords—is now furnishing dealers with an attractive counter display, showing the new model "B" Bull Dog pedal. The display occupies a space on the counter only 4 inches wide and 8 inches long.

The Thomas Company furnishes the Bull Dog counter merchandiser with an order for ten accelerators.



Anchor Shock Absorbers



Rainbow Mirror

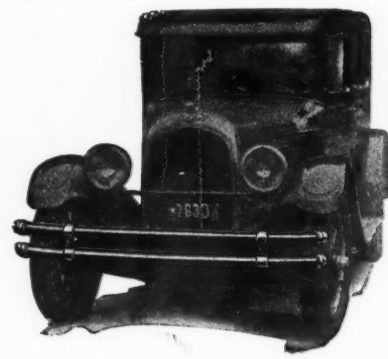
Anchor Shock Absorbers

ANCHOR Electric Company, 557 W. Jackson Boul., Chicago, assures the motorist easy riding through use of Anchor (ball bearing) Shock Absorbers which are being produced by this organization. Attached to the springs in 20 minutes with a wrench a set of these shock absorbers is declared to act with the springs in a manner which keeps them under constant control so as to retard the movement back to normal after a down thrust and in the rebound. This control is said to prevent side swaying and absorb vibrations. The device is adapted to directly support the main or rebound leaf and bring into action all units of the spring. The springs are strengthened by separation of the main leaves from auxiliary leaves. The total action is such as to bring all spring members under the stress. While the car springs are free to flex the pressure of the ball bearings on the spring is constantly maintained through the resilient effect of the coil springs and the vibration of the car is checked. The shock absorbers sell for \$10 a set installed.

Rainbow Mirrors

REAR headlight glare is eliminated when Rainbow mirrors are used, is the claim of the Monarch Tool & Machinery Co., 522 S. Clinton St., Chicago. These mirrors are made in amber, blue and black glass and are provided with the Sta-Put bracket. This is not a ball joint bracket, but the mirrors can be adjusted to any desired angle and then securely fastened. Prices: Amber or blue, 2 1/2 in. by 7 in., plain edge, \$1.50; same kind of glass, size 2 1/2 in. by 9 in. with bevel edge, \$2.25; black glass, 2 1/2 in. by 7 in., with bevel edge, \$2.50. This company also manufactures a line of crystal silvered and plate silvered mirrors ranging in price from \$1 to \$2.25.

Full details concerning the Monarch's lines of products may be had by addressing the factory in Chicago.



Gemco Round Bar Bumpers

The READERS' CLEARING HOUSE

Questions And
Answers



On Dealers
Problems

Valve Timing of Model N Hupmobile

Q.—Advise the correct valve timing on a model N 1917 Hupmobile, also the correct valve clearance on the same car.—California Subscriber.

The intake opens on dead center and the exhaust closes 5 degrees after top dead center. The tappet clearance is given as .003 inches in the data we have available. If this setting is made with the engine cold, however, it would be well to check it after the engine is fairly warmed up to see that the tappets are not holding the valves open, when they should be closed.

Q.—On front axles using brakes what is the ordinary amount of inclination of the king pins measured in degrees? In case such an axle is bent in an accident what is the best method of procedure in straightening such an axle to get the correct angle of inclination?

The angle in degrees might vary depending on the size of the wheel and on the distance of the king pin from the center of the wheel. The general principle, however, is to have the angle of the king pin such that if extended it would strike the road at the same place that the center of the tire strikes the road. In this way there is no tendency for the wheel to turn either to the left or to the right when it strikes an obstruction, for the obstruction has no turning moment around the king pin. Accordingly if an axle has been bent and the exact data is not available it would seem well to check it up by having the spindles in place and the wheels on the spindle. Then if the axle should be straightened until both wheels were absolutely vertical it would be definitely established that the king pin angle was correct. This applies to the angle as seen from in front of the car when looking at the axle. It would also be necessary to have the king pins in line with each other as seen from the right side of the car looking toward the left along the axle. Here again it would be desirable to know how the original axle was designed. In some cases the king pin might be very nearly vertical as seen looking from right to left while in other cases there might be some caster produced by having the upper portion of the pin back with regard to the lower portion.

MISBEHAVES MOST ON A HILL

Q.—What can we do to keep Ford starter Bendix gear from locking? The starter, when starting the car headed down hill seems to lock oftener. We have a lot of trouble with a few cars while others seem to give no trouble.—Franklin Brion, Liberty Garage, Liberty, Pa.

The Bendix pinion drive works best

when the meshing of pinion and ring gear is rather loose. This give plenty of opportunity for the gears to mesh together. If the meshing is rather tight there is more of a tendency for the end of the pinion tooth to strike on the end of a ring gear tooth. The angle of the chamfer of the teeth may also have something to do with it, although the cars probably come through practically the same. If you have occasion to reline bands on cars which are giving trouble, you might be able to inspect the ring gear and sharpen up the teeth somewhat, so that there will be a better chance for the pinion to mesh properly. We do not see that the car being on a hill would have any effect.

HUPMOBILE VALVE TIMING

Q.—I am stuck on a Hupmobile 32. The valve timing is what I would like to have.—Carl Sieguist, 14600 Jefferson East, Detroit, Mich.

Herewith is the valve timing on the Hupmobile model 32.

Intake Valve

Opens 25 deg. after top dead center.
Closes 35 deg. after bottom dead center.

Exhaust Valve

Opens 40 deg. before bottom dead center.
Closes 20 deg. after top dead center.

Annealing Valve Stems To Drill Hole

Q.—We wish to install Fordson valves (new style) in a Chevrolet truck. It is necessary to cut them off and drill them again for the spring pin holes. We cannot draw the temper on the stem so we can drill the holes. Can you tell us how to soften the stem so they can be drilled?—J. Johnson, Jr., Sabinal, Tex.

Sudden cooling causes steel to harden while very slow cooling is necessary to leave it in a soft condition. We would accordingly recommend your getting a box of sand or perhaps finely powdered dry clay or something of that sort. A packing of this character is necessary in order to keep the valve stems from cooling off quickly. It would then be desirable to heat this box of packing material and also heat the valve stem to a dull red. Quickly pack the stem in the packing material and allow it to cool off slowly. If it takes several hours to cool off you will probably find that it is soft enough to drill. Then if you wish to harden the stem again after drilling you can heat it to a very dull red and plunge in oil. It would probably be inadvisable to plunge the stems in water as you might get them so hard they would break in service.

Readers' Clearing House Index

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Planning Your New Building

Chrysler Distributor Wants Sales and Service Building with Large Capacity for New Cars and Parts

By Tom Wilder

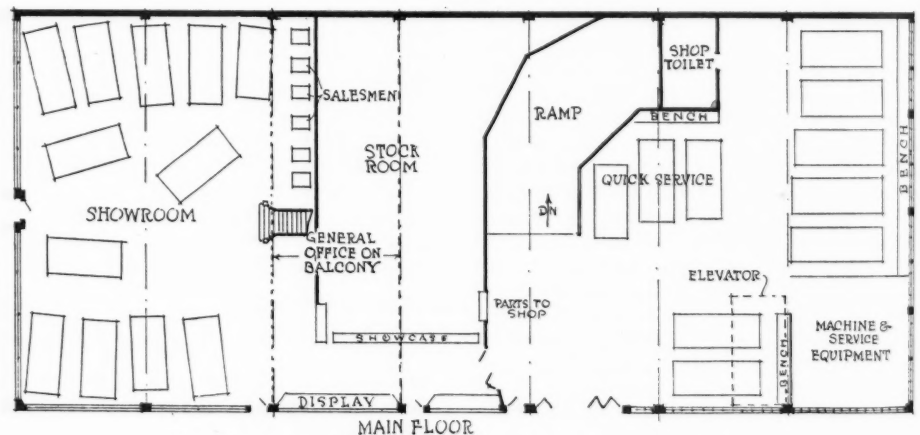
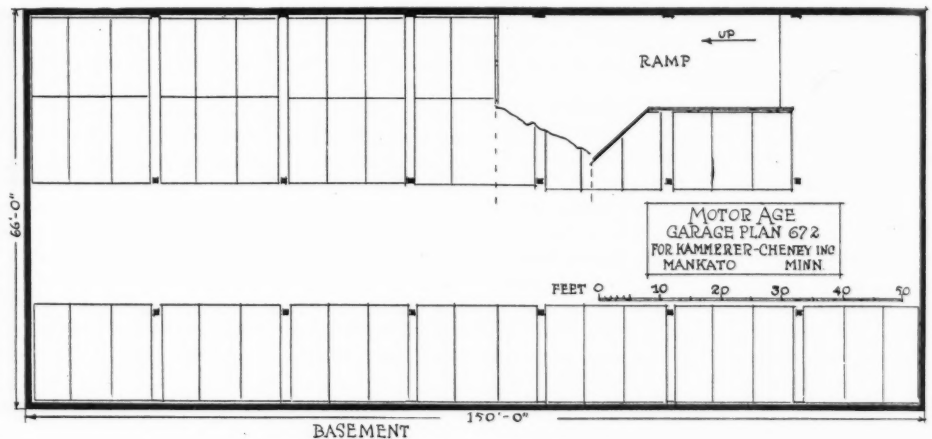
Q.—Just as quickly as we can get things arranged we are going to construct a new garage building on a piece of property which we have just purchased. Our plans are that this building shall be 66 by 150 ft. in size, full basement and one story. We have not as yet decided whether we shall have a front driveway or whether to utilize the entire front for a showroom. We expect to use this building in connection with the sales and service of Chrysler automobiles. We are not planning to derive our income out of this property from storage or general repair work.

We have a distributing contract with the Chrysler Corporation covering a territory of eleven counties in southern Minnesota. This requires that we carry a considerable stock of new cars at all times and also a fairly large stock of Maxwell and Chrysler parts. Our Parts Department will be one of the important departments in our organization. We are laying a lot of stress also on our Service Department which will be handled by a competent service manager. While we have not definitely decided, it is our thought now that we shall have a showroom 66 ft. wide, by about 50 ft. deep, or a place to show in a credible manner, ten or twelve Chrysler cars.

The basement in this building will be fine for the storage of your large stock of new cars, but will be worthless for service and consequently you will be obliged to crowd in on the first floor the service department, the large stockroom and the office and showroom.

We would suggest that you relieve the pressure slightly by building a balcony for the offices. We have not drawn a floor plan, but have indicated its position by a dotted line showing that it extends back over the stockroom and out over the showroom enough to make it about 20 ft. wide. The overhang in front will furnish a space for a row of salesmen's desks. An ornamental or at least a well designed stairway will add to the appearance of the showroom and the space under the balcony to the right of the stairway will be a good place for the display of tires, also special accessories in an illuminated showcase.

We have used a ramp in our plan, but if you are not storing anything but new cars in the basement it would be well to consider an elevator as in this way quite a saving in space could be made to help out the service department or the stockroom or both. A convenient location for the elevator would be that shown by the dotted line on our sketch. Here it would be conveniently entered either from the inside or from the outside of the building. By eliminating the ramp the stockroom wall could be moved back in line with the truss about 7 ft. and this whole wall from one side of the



The showroom will hold ten or twelve cars very nicely

building to the other would then be free for the service of a row of seven cars. This is not all gain however, as the two spaces by the window and the three marked quick service will be eliminated making a net gain of only two cars.

The arrangement of cars and columns in the basement should be reversed if the elevator is used as suggested. The double row of cars would be where the single row now is, etc., so that the elevator would not project into the aisle, but would be set back instead.

We would not recommend a front driveway as this would limit still more the already crowded main floor and is, in reality, not necessary at all.

It might be worth while to consider the possibility of using a second floor instead of basement if you should find that you need more service space and less car storage space. This would give you beside more service space, considerable garage space on the main floor to accommodate demonstrators, cars waiting service and cars finished.

Big Demonstration Tells Detroit of New Oakland

All Detroit knew of the introduction of the new Oaklands because of a clever campaign put over by the Richards-Oakland Co., Detroit distributors for Oakland and Pontiac cars.

For a week preceding the introduction the company carried a unique newspaper advertising campaign, and, on Saturday, when crowds were hurrying home from their offices, the company staged a street parade headed by a band and a squad of motorcycle police. In the line were 250 new Oaklands which had been sold to prospective purchasers before they had an opportunity to see the new models.

The parade, which started at the Oakland factory in Pontiac, attracted the attention of thousands, and made the car perhaps the most talked of over the week-end. Following the demonstration, persons flocked to the various Oakland showrooms to view the new models.

Answers to Readers' Questions

Front Axle Steering Design Explained

Q.—Can you tell me how the angle between the spindle arms and the axle is determined? I used to have a rule that the straight line drawn through the king pins and the tie rod ends should meet in the center of the differential. This, of course, makes a sharper angle for cars of short wheelbase, allowing the inside wheel to be turned for the smaller circle. However, I have noticed that on modern cars with balloon tires these lines meet several inches in front of the differential. Do balloon tires make a change in the way this angle is determined or is it varied depending on the wheelbase?—Theo. R. Farrington, 6704 S. Campbell Ave., Chicago, Ill.

In the early days when the wheelbase of a car was not very much longer than the tread, the rule was established that the axes of the steering knuckle arms produced should meet at the center of the rear axle and this construction was known as the Jeantaud diagram, Jeantaud being a French carriage builder and manufacturer of electric carriages. With our modern long wheelbase cars the two axes should intersect a goodly distance ahead of the rear axle. Theoretically the steering mechanism should be so designed that the axes of all four road wheels always meet in a common point. Practically it is impossible to attain this end with the form of linkage we use, and the problem then is to so design the linkage that the average deviation from this ideal (which means the average amount of slippage of one of the wheels in turning) is a minimum. By average is meant the average over the whole range of steering angles, say from zero to 35 deg. The method of laying out the steering gear is more fully explained in Volume 2 of the Gasoline Automobile, by P. M. Heldt.

LET SUCTION CLEAN THE VALVES

On page 29 of the July 1, 1926, issue of MOTOR AGE there was an article entitled "Hudson Trouble Shooters Lend a Hand." I have had the same experience described in this article where a Hudson car after running 300 miles would develop trouble due to the carbon accumulating on the valve stems. This trouble can be overcome by using a better grade of oil which does not form carbon so readily. When this trouble does develop it can be cured by running the engine until it is very hot. Then while engine is still running, disconnect the vacuum pipe that runs from tank to intake manifold and put the end of the pipe into a quart of kerosene, still keeping the engine running at high speed. This will draw the kerosene into the engine and the kerosene will cut the carbon from

the valve stems. This method has proven successful in many cases and only takes five minutes.—A. B. Jacobson, Square Deal Garage, 604 E. Slauson, Huntington Park, Calif.

JEFFERY VALVE TIMING

Q.—Please inform me by return mail how to correctly time the valves on a 1916 Jeffery Six. There are no marks on chain sprockets or flywheel.—Earl Nevin, Big Four Garage, Rear 250 W. Washington St., Frankfort, Ind.

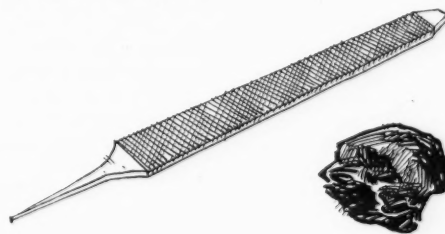
We do not have information on 1916 models, but in 1915 the timing on model 93-2 and 106 was as follows: Intake opens 18 deg. after top dead center, exhaust closes 15 deg. after top dead center. On model 104 of the same year the intake opens 15 deg. after top dead center and the exhaust closes 10 deg. after top dead center. The valve timing of many cars is very nearly identical, so we believe you would be safe on the 1916 car to follow the timing just given, setting the camshaft so that the intake opens somewhere between 15 and 18 deg. after top dead center. You will probably find that a difference of one tooth on the chain and sprocket meshing will throw the timing off far enough so that you can tell when you have the right setting.

SHOP KINKS IDEAS

That have been Found Useful

Making An Old File Cut

Here is a trick I have found to be worth real money in a pinch and when a good file is not to be had. Any old file that has been worn down and refuses to cut can be made to cut by the simple operation of cleaning it with a piece of charcoal. It is surprising what results this will produce.—C. E. Tucker, Tucker Auto Repair, 4483 Enright Ave., St. Louis, Mo.



Readers of MOTOR AGE are invited to submit ideas that they have found useful in doing some particular service job in the shop in a better or quicker way. For each one published \$2.00 will be paid. Whenever possible the idea should be accompanied by a sketch or diagram from which a drawing can be made.

Stains Not Removed With Gas Spray

Q.—We have recently installed a well known engine cleaner in our garage. So far we have not met with the success we feel that we must have in this work. We have used both kerosene and gasoline and either will remove the grease, but neither will remove stains from the engine. We have plenty of air pressure to throw the gas on the engine in a strong vapor, but it does not do the work. Please tell us if there is much danger of setting the car on fire when using gasoline?—Beatrice Motor Inn, Beatrice, Nebr.

We will give you by separate letter the name of a concern making a chemical which is good for cleaning engine parts. If used in the vicinity of painted surfaces it is likely, however, to remove the paint as well as grease and dirt. You may find it necessary to do a little rubbing if you wish to remove stains. As far as fire is concerned there is no question but what you must be very careful with gasoline vapor or spray. When working on a car it is desirable that one terminal of the battery be disconnected before you start to spray gasoline on the engine. If this is done there is no danger of making an accidental connection between a live wire or terminal and the frame of the engine. We know of one case where a car was being washed with gasoline and a brush with metal bristles was used. This brush caused a short circuit which set the car on fire, because the battery had not been disconnected.

HELPS FOR FUEL VAPORIZATION

Q.—As pointed out in the Clearing House Department of MOTOR AGE some time ago, the carburetor throttle valve on a Chevrolet Superior model is located crosswise of the engine which causes the gas mixture to go either to the front or rear cylinders when idling, thereby causing uneven running. Would it remedy this condition to apply additional heat to the manifold.—New Jersey Reader.

Yes, additional heat to the manifold will reduce the trouble experienced as the result of condensation. It might also help to use some device which will collect the condensation from the manifold walls and throw it back into the center of the air stream.

MERCER PARTS WANTED

Q.—We have a Mercer sport touring 1923 and would like to know where we can get an instruction book for it and also where we can get spare parts. Also was this engine built by Hershell-Spillman?—U. S. Jackson, P. O. Box 253, Holliday's Cove, W. Va.

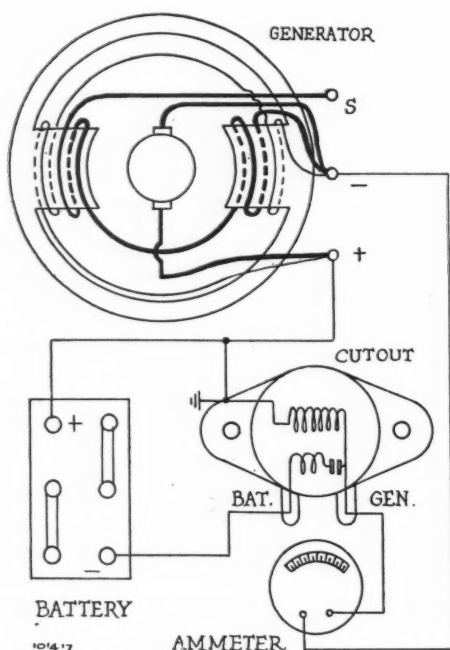
We greatly doubt if you will be able to obtain an instruction book for this car. Parts may be obtained from the United Motive Parts Co., 302 W. 53rd St., New York City, N. Y. The engine in this car was built by the Mercer Co.

Clearing Up Electrical Troubles

Making Obsolete Generator Pep Up Batteries

Q.—I have a Gray & Davis generator type G No. 13381 which I wish to use to charge a 6 volt storage battery. This is a three wire generator. I will run it with a gas engine. Kindly furnish me with a wiring diagram showing how to wire it with and without a Ford cutout. Show which is positive and which is negative wire.—Harold A. Barton, Stockton, Ill.

The diagram is shown using the Ford cutout. If you do not wish to use the Ford cutout you can eliminate the wire



Wiring cutout in charging circuit

running to the base plate of the cutout. This would still leave a wire connected from positive generator to positive battery. You would then need an ordinary switch to which you would connect the two wires which are shown attached to the Bat. and Gen. terminals of the cutout. It would then be necessary to start your engine and as soon as it started close this switch so the charging current could flow through the ammeter to battery. You might also eliminate the ammeter if you wish to after you have checked up the system and find it works O. K. We have shown only two of the terminals in use. If you have the generator running and wish a higher charging rate you can remove the wire from the negative terminal and connect it to the S terminal. This will give you a higher charging rate as it causes the current to go through the series winding which is not a bucking winding, but a boosting winding. There is one precaution to take if

Edited By A. H. Packer

you use this S terminal. Under these circumstances do not short circuit or connect the Bat. and the Gen. terminals of the cutout. If you do, with the engine not running it will allow battery current to flow through the generator winding and on account of the way the series winding is connected it will reverse the magnetism in the generator. Then when it builds up it will tend to discharge the battery instead of charge it. If you should make this mistake just put the wire from the S terminal back to the negative terminal and short circuit the Bat. and Gen. terminals of the cutout once. This will correct conditions and will properly magnetize the field of the generator.

TESTING FORD MAGNETO COILS

Q.—How can a magneto coil assembly be tested without putting it in the engine to determine whether it will give easy starting. I have tested using a lamp, also current from a storage battery, but do not get satisfactory results. The car runs fine after starting, but will not start easily. I have tried different coils. One may start with a quarter turn of the engine and the other will not start unless by spinning the engine. After starting both cars will run equally well.—S. F. Sivertson, Local, Minn.

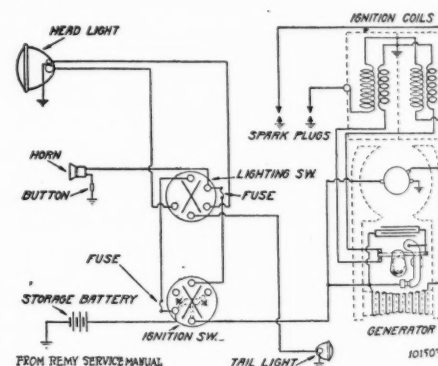
A rough check on the winding can be made by running current through it. The current should be checked with an ammeter. If you connect a six volt battery to the magneto winding of a Ford coil it should draw about 12 amp. If you connect a 12 volt battery it should draw 24 amp. and so on. If the current is very much in excess of the figure given it shows the coils are shorted or grounded. You could test for ground by disconnecting the normal ground and then using 110 volt lamp test, from the frame of the coil assembly to the insulated terminal. A third test you might make would be using a compass to make sure that you have alternate north and south poles going all around the winding. This test would be made with battery current flowing through the coils.

Other conditions affect the speed with which the engine will start. It is necessary to have the magnets properly magnetized and to have them properly located on the flywheel. It is also necessary to have the end play in the crankshaft reduced so that a constant gap is maintained between the magnets and the pole pieces of the coil. The operation of the timer and vibration coils also has to do with the starting characteristics. You might also find that in one engine the gas does not draw up into the cylinders as readily as it does in another. This also will affect the ease of starting.

Electrical System on 1918 Harley

Q.—Please send us internal wiring diagram of a Remy generator model 250 used on 1918 Harley Davidson motorcycle. How is the charging rate increased on this model? The field has three leads. The condenser has two leads. Does the field with two leads go to the right side? Joe Brown & Sons, 604 N. Elm St., Henderson, Ky.

We are publishing the diagram and this should enable you to properly connect this machine. If you are looking at the machine the same way it is shown in the diagram then the right field lead goes to the third brush while the left end of the field which has three connections goes to one interrupter point, to the condenser and to the wire which runs to the insulated brush. The charging current is regulated by means of a third brush and the output at 1,500 R.P.M. should be 3 amp. at 6.3 volts. The maximum output is 4.5 amperes at 6.5 volts and should be obtained at 600 R.P.M. The field winding should draw 1.7 amp. at 6 volts. Brush tension is 6 oz.



Complicated motorcycle wiring circuits

IGNITION ADJUSTMENTS ON CHEVROLET

Q.—On a Chevrolet Superior what is the proper spark plug gap and interrupter point opening? This car uses Remy ignition.

The spark plug gap should be set at .025 in. and the interrupter point opening should be .027 in.

Q.—Would you recommend extra long spark plugs for this car instead of short ones.—New Jersey Reader.

There is no reason for having spark plugs which do more than bring the spark gap into the combustion chamber. It is not desirable to have the sparks up in a pocket where there may be dead gas around the gap. On the other hand it is not desirable to have the electrodes so long that they extend down into the combustion chamber, become incandescent and cause pre-ignition.

Answers to Readers' Questions

Steam or Gasoline Power for Boat

Q.—I am building a 26 ft. speed boat and wish to know which of the two power plants will give me the most power and speed, a model 51, eight cylinder Cadillac, or a 30 h.p. Stanley steam engine which was used in the old model steam car. What was the engine speed of the model 51 Cadillac and what is the horsepower? What was the actual brake horsepower of the Stanley engine and what speed in R.P.M. when the car was traveling 60 miles per hour? Can you furnish diagram of the Stanley power plant including boiler?—E. F. Church Garage, Stockton, Calif.

For detailed information on power plants for motor boats would suggest your writing to one or two motor boat magazines. We are giving you names of two of these by letter. For information on the steam power plant it might also be well to write to the Steam Vehicle Corporation of America, Stanley Division, Allentown, Pa. We are showing piping diagram which includes boiler and engine of one of the Stanley cars, although we are not certain that this is the model to which you refer. We do not know of this steam power plant being used in a motor boat, but possibly some of our readers will have had this experience.

The Cadillac engine is rated at 31.28 horsepower and will probably develop double that power. It would therefore seem that the Cadillac engine would develop greater maximum horsepower while the Stanley power plant might give a little more flexibility for low speed cruising without the use of gearing. We have not located definite information on the power and speed of the Cadillac engine, but would estimate between 55 and

60 horsepower at an engine speed of 1,800 to 2,000 R. P. M. For additional information would suggest your consulting with the makers of the power plants in question.

GEAR SHIFT LEVER JUMPS OUT

Q.—I have received much useful information in the questions and answers in the Reader's Clearing House and now I have a problem of my own. I have an Essex four, 1920, that jumps out of high when I drive over rough roads or am making a steep hill and stepping on the gas. I have examined the transmission gears and find them in good shape, also took out all the play in the rear axle which helped some.—W. C. Bergholte, 22 5th St., N. E., Minneapolis, Minn.

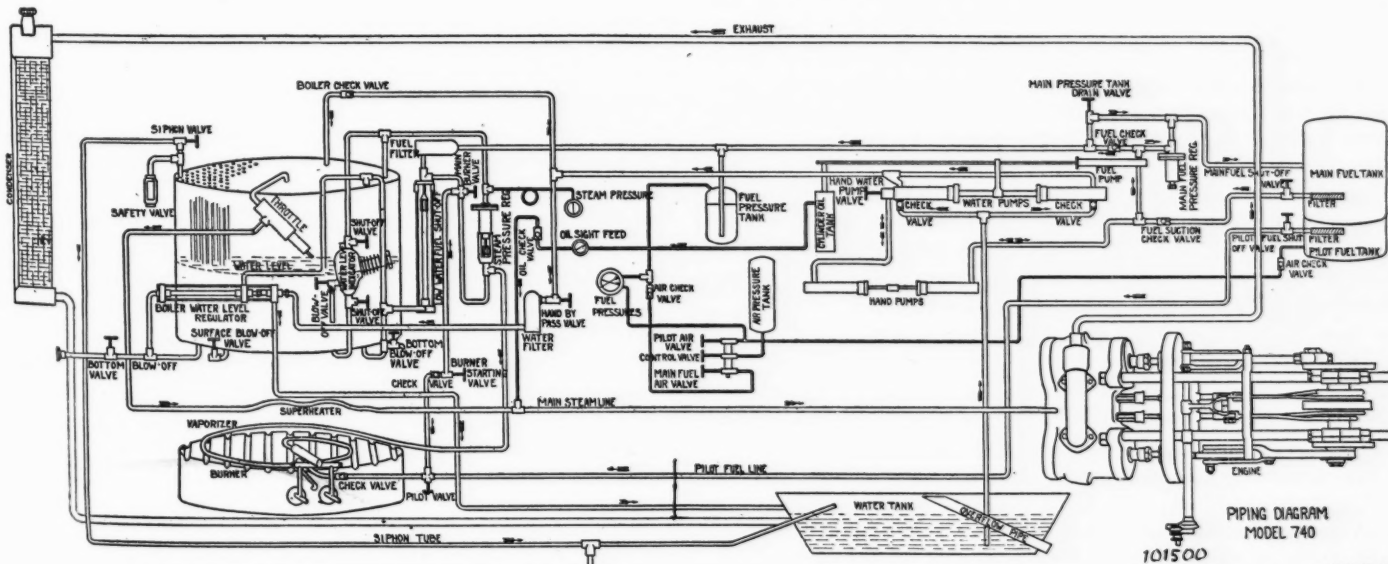
It is probable that the thrust washers in front of the front gear in the transmission are worn so that this gear is too far forward and does not mesh very closely with the high speed gear immediately behind it. A remedy that you might try is to remove the $\frac{1}{2}$ in. steel ball which is used to engage with the notches in the shifter shafts and replace it with a $\frac{1}{8}$ in. ball which will mesh more deeply into the V shaped notches.

This will necessitate stiffening the spring which operates the ball or using a new spring and may necessitate using spacers in order to get stiffer spring action. If this fails to prevent the trouble it may be necessary to remove the transmission and clutch, taking the clutch away from the transmission. It will then be necessary to install new thrust washers so that the front gear of the transmission will be properly located and will give the correct depth of meshing in high.

Installing Two Chains Or Only One

Q.—Thanks ever so much for the information on removing Cadillac valves. I would like to have some more information. As I understand it there are two chains on a model 55 Cadillac. Is it advisable to renew only one of the chains? The crankshaft to camshaft chain is the one having the most slack, and the total amount of fan movement due to the slack is two inches for the two chains. Is there any way to install half links to shorten these chains? Will the slack in the chain cause the engine to overheat?—John A. Whitman, 134 Campus Ave., Ames, Iowa.

The Cadillac manual specifically states that both chains should be replaced at the same time and that the repair should not be made by replacing only one chain. We believe this recommendation is made on the same principle that it would be unwise to have a half sole put on one shoe because a hole had appeared in only one. We all know that when shoes are in bad condition half soles are put on both of them because if this were not done the shoe which appears good would develop a hole in a few days or a week later. The elongation of the chain which produces the slack is due to wear at the joints so that the increase in length is really a danger signal. The increase in length also changes the pitch of the chain so that it no longer fits properly on the sprockets. This is another reason for changing the chain. We accordingly feel there is just one way of making the repair correctly and that is to put on both chains when there is a two inch movement at the rim of the fan.



Complete piping diagram of Stanley Steamer

Letters to the Editor

Mr. Disher Discusses Future of the Jobber

Milwaukee, Wis.

To the Editor of MOTOR AGE:

Will the jobber of automotive accessories be able to maintain his present status?—Time and again this question has been asked. If he does, he must become stronger and of a more important factor in the trade than he is at the present time. He cannot stand still.

Many predict mail order houses, the "gyp" and car distributor will eat farther into his business. That would mean that his business would be less, his profits smaller and, eventually, he would pass out of the picture. We all know these disturbing elements are a factor that must be reckoned with. They cannot be legislated out of business.

The automotive accessory jobber came into existence as an economic necessity and he is as much a necessity now, if not more so, than in the early days.

You say: "Then why ask the question?" The answer is: All depends upon what he will do with certain factors. The worst part of it is he is the greatest contributor to this undermining process. There are also many manufacturers contributing.

Now, what can be done to stop this? Certainly the first step is for the jobber to determine who is undermining him and who is not; who his manufacturing friends are that are giving him their wholehearted support. After he has learned this his moral duty is to patronize them and tell the manufacturers who are undermining his business, by selling the "gyp," mail order house and the car distributor, at jobbers' prices or even better, that he is all through regardless of extra discounts or special concessions that they may offer. He will then be taking the first important step in putting his business on a sound foundation.

Manufacturers have a right to sell the "gyp," mail order house and car distributor at whatever price they see fit, but after they have sold these people they certainly have "nerve" when they ask the jobber to patronize them also.

Now, these are just common every day facts—common sense—and every one will say: "That is right." Then what is the trouble? It is with the jobber himself, and very largely due to the fact that the purchasing agent has never been instructed from whom to buy but is allowed to buy from whomever he sees fit.

How many managers have patted their purchasing agent on the back and especially commented on his excellent work for having gotten an extra 5 or 10 per cent discount, freight allowance, or some other special concession from some weak-kneed manufacturer who has no selling policy? And by way of passing comment, a manufacturer who can be influenced to make special concessions, to certain jobbers because of extra pressure brought to bear upon them by the purchasing agent, certainly is not reli-

able, has no definite selling policy and can be expected to sell the "gyp" or most any one.

Now, to my mind, one of the first instructions that should be given to the purchasing agent is, that before examining a manufacturer's merchandise, talking to him about price, quality or anything else, let him get the manufacturer to lay his cards right down on the table and commit himself as to his selling policy and have him do it in writing so there can be no question. Then, after he has done this, the jobber should be mighty sure that this policy fits in with his sales policy, and when he has fully satisfied himself on this point, it is then time to examine merchandise, talk prices, quality, etc. If he finds he does not have a clean, jobbing policy, he should not even take time to examine the merchandise, but proceed to find some other manufacturer who can supply him with this merchandise and who will not undermine his business after having sold him.

Too many buyers in the past have lost sight of everything except prices, extra discount or a special concession of some kind and it is to be regretted that the jobber, as a whole, is now reaping the reward of such false economy.

The car distributor is an economic necessity in the distribution of automobiles. The organization is built for handling this particular product. Accessories, tools, etc., are a very different class of merchandise and must be marketed in an entirely different way. The car distributor does not get out a catalog; does not carry a complete line; has no salesmen except those selling automobiles and he does not, in any way, perform the function of a jobber. He selects a few profitable volume items and tries to corral the business on these, leaving the automotive accessory jobber to supply the numerous smaller volume items that a dealer must have to conduct his business but on which there is little or no profit to the jobber.

From the standpoint of ethics, there is nothing fair about it and from the standpoint of economic distribution, I believe it is unsound and will eventually fail in its purpose.

It is the history of every industry that the larger it becomes, the more it naturally divides itself into departments or channels of distribution and certainly this industry is no exception, and the variety of merchandise further accentuates this condition.

We are living in a time of specialization and this has proved to be the most efficient. Now, if the jobber is going to help support the manufacturer who sells these car distributors at jobbers' or even better than jobbers' prices on such items as shock absorbers, windshield wipers, stop lights, bumpers, etc., he has every reason to expect that this distributor will not stop with these items but will go farther and sell tools, spark plugs, and all

(Continued on page 34)

SOME NEW AIDS FOR THE SHOP

The Mayo Press

The Mayo is a press for practical use. It was designed with this purpose in mind, and its features, new in press construction, give it strength, power and speed. The head is movable. It slides easily from the extreme left to the extreme right of the press and works in any position. The working space is limited only by the width of the press. This feature permits the straightening of wheels, aligning of crankshafts and other jobs.

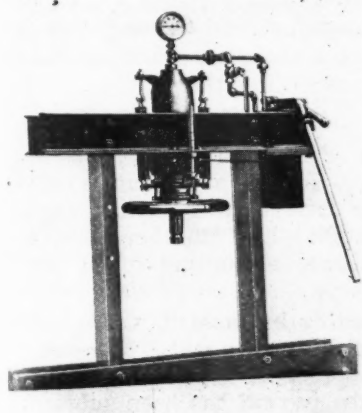
A crank and ratchet allow one man to raise or lower the bed and quickly place the work in the handiest position. The hand wheel used in applying pressure is in a vertical plane—not horizontal. It is thus placed so it can't obstruct a clear view of the work.

The worm and gear drive is designed to prevent friction. A one pound pull on the wheel exerts four hundred pounds of pressure. The speed of the screw is six inches per minute.

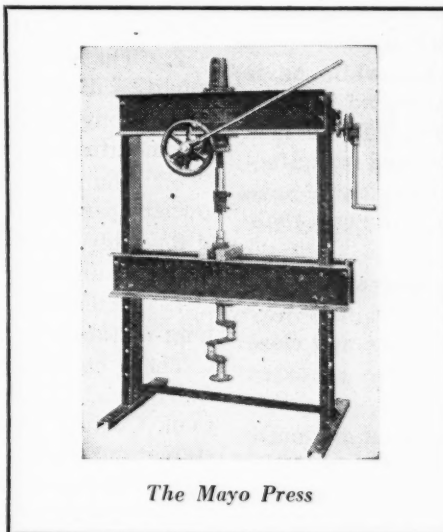
The Mayo press has eliminated the slotted keyway. The screw is held in the head. This feature is said to overcome a weakness in press construction and permits the starting of hard jobs by a sledge blow on the bottom of the bed. Mayo equipment is distributed by David Lupton's Sons Co., Philadelphia, Pa.

Manley Tire Changer

Speed and efficiency are claimed for the Manley Tire Changer being produced by the Manley Manufacturing Company, York, Pa. The Manley Tire Changer consists of three double jaws having uniform radial motion from the center. The rim is gripped by hooks on the outer ends of these jaws. When they are moved inwardly the diameter is decreased and the split rims contracted. The inside of the rim is pushed outwardly and locked by reversing the motion. The double jaws provide a two-point contact which preserves the natural contour of the rim when contracting or expanding. It is pointed out that this double grip is especially important in handling balloon tire rims as their



Hydraulic Conversion Unit

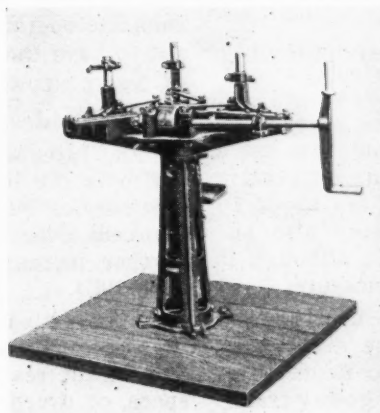


The Mayo Press

great width increases the tendency to distort if only single jaws are used. Solid rims, wire wheels or disc wheels are gripped in a notch of the jaws. In order to remove tires from solid rims a separate attachment is provided which can be put quickly in place. No. 900 plain machine for split rims weighs 210 lbs. and lists at \$50; No. 901 machine complete for split and solid rims weighs 269 lbs. and lists at \$65; No. 902, an attachment for solid rims only weighs 56 lbs. and lists at \$15

Heavy Portable Electric Drill

Declared by the makers to answer every need in extensive heavy duty production work a new $\frac{1}{2}$ Heavy Portable Electric Drill has been brought out by the Black & Decker Manufacturing Company, Towson, Md. The drill has a "pistol grip" and "trigger switch" and is of exceptionally light weight. The weight is but 10½ lbs. and the drill has no-load speed of 1400 r.p.m. It comes complete with a three-jaw, hand tightened chuck for which no chuck key is required. It takes straight shank drill bits up to $\frac{1}{2}$ in. which is maximum capacity for steel. Equipped with 15 feet of duplex electric cable and a separable attachment plug. The price for the drill (110 volts) is \$58; 220, 250 or 32 volts \$62.



Manley Tire Changer

Hydraulic Conversion Unit

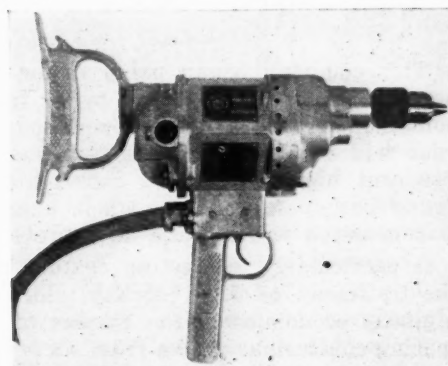
Converting the Manley 30-ton screw press into a quick-acting hydraulic press is the purpose of the Manley Hydraulic Conversion Unit No. 31, according to the Manley Manufacturing Company, York, Pa. The unit is easily and quickly attached and was designed for speed and power. Using the hydraulic principle it has one pump which drives the ram. By operating the pump pressure is obtained from the cylinder which has an 8 inch travel and is transmitted through the screw to the work. This combination of a powerful and fast hydraulic pressure, plus the quick adjusting screw and an instantaneous release makes the machine exceptionally fast in operation. A pressure gage is furnished to aid in the elimination of overloading. The Hydraulic Conversion Unit which converts No. 1 and No. 21 presses from screw type to hydraulic (without pressure gage) list at \$75; the pressure gage lists at \$10.

Mayo Demonstration Truck

David Lupton's Sons Company is receiving many favorable reports in connection with the tour being made by the Mayo demonstration truck. The company is distributor of Mayo equipment and the truck is visiting jobbers throughout the country. It is equipped with the Mayo collapsible three ton wrecking crane, the Mayo 40-ton press, Mayo Press Pullers, gear pullers and other Mayo devices. Much interest is being shown at the demonstration.

Lyon Portable Tool Stand

A portable tool stand which is said to add much to the mechanic's convenience is being produced by the Lyon Metallic Manufacturing Company, Aurora, Ill. This is a handy device for taking tools from one job to another. It also provides a place for greasy and oil dripping parts and serves as a work bench close to the job. At night tools may be locked in the drawer provided with the stand. Without the drawer the stand is useful as a stockroom parts truck.



Black & Decker Drill

Future of the Jobber

(Continued from page 32)

other items of accessories in the same way—in other words—attempt to substitute the accessory jobber.

In time I believe he will fall down; but while he is finding this out he is mudding up the waters and possibly wrecking many a good jobbing institution. There is a principle involved that we must stand on and manufacturers who are going to play with the car distributor have no right to expect accessory jobbers to purchase their merchandise.

Manufacturers and jobbers alike must determine on a definite policy and stand on it. There is no half way ground. They can no longer straddle the fence and close an eye to policy because the manufacturer has an extra concession of some kind.

I believe we are at the parting of the ways. Each must choose their course. When manufacturers, with a *JOB-BING POLICY*, and jobbers with a right kind of *PUR-CHASING POLICY*, work hand in hand, success is assured and in no other way can the jobbing business survive.

May I be pardoned for making special reference to our particular product—*BUMPERS*. Let me ask: "Is it not absurd for a manufacturer to get a jobber to use four or five pages of his catalog to show the manufacturer's line; put their selling organization behind the product; go out and get a lot of dealer contracts and then to find that the very same manufacturer's product can be purchased by the dealers direct from the car distributor at prices considerable less than the jobber can possibly sell at?"

The accessory jobber helped to pioneer the bumper business and he certainly now is entitled to some reward for his efforts—and what applies to the bumper business applies to every item that is sold by the jobber.

The above are my honest convictions, based on over twenty years of experience in playing one hundred per cent with the jobber, and I am more convinced now than ever, that this policy is sound. I am convinced that if the accessory jobber is to stay in the picture, he must co-operate one hundred per cent with only such manufacturers as will co-operate one hundred per cent with him.

This letter is open for comments and criticisms from anyone familiar with the industry.

Respectfully submitted,
G. F. Disher, President,
GEMCO MANUFACTURING CO.

The Greatness of Automotive Transportation

(Continued from page 13)

This company began using motor coaches as feeders, serving sections not reached by its trains, but now has a combined service of wide proportions, offering alternative routes in many cases. Although bus rates are about 10 per cent higher than rail rates this company also has found bus operation as a whole unprofitable although it is considered worth while as a protective measure.

A particularly interesting feature of the hearing was the testimony of J. G. McKay, chief of the division of highway economics of the Bureau of Public Roads, presenting conclusions drawn from surveys of highway transportation made in several states and communities. These conclusions are summarized as follows:

1. The motor truck is used principally for local distribution of merchandise, chiefly food stuffs.

2. Hauls of more than 60 miles constitute a very small proportion of truck use.

3. The greater part of truck distribution is of commodities direct to the ultimate consumer.

4. Long hauls by truck are economical only for special commodities, such as household goods.

5. The bulk of the trucking business is performed by owner-operators.

6. Only a small part of commercial trucking is interstate, a survey in Connecticut revealing 6.9 per cent.

7. Extension of truck transportation of freight over long distances is in general economically unsound.

These conclusions were drawn from surveys made in California, Connecticut, Pennsylvania, Ohio, Maine, and Cook County, Ill. The state surveys covered the entire states and were carried on for a full year, and the Cook County survey covered three months. In all, the operations of 6,500,000 vehicles were analyzed. Complete published reports of these surveys, just issued by the Bureau of Public Roads, were entered in the record as exhibits.

A word in defense of the motor vehicle from the taxation standpoint was given in the testimony of Mr. McDonald of the Bureau of Public Roads. There had been some testimony that motor vehicles were given unfair use of highways constructed from public funds. Mr. McDonald showed that last year automotive license fees and gasoline taxes amounted to more than \$500,000,000 and he estimated that personal property taxes, wheel taxes and various other fees imposed by states or local authorities amounted to more than \$200,000,000 more, making a total contribution from automotive vehicle owners of more than \$700,000,000. The total road bill of the country, he said, was about \$1,000,000,000, of which motor vehicles contributed directly about three-fourths.

What Flat Rate Did for Pence

(Continued from page 11)

"Trouble shooters and service salesmen are on a weekly salary. Their sole duty is to meet the customers and determine exactly the nature of the trouble so that when the car goes to the shop the repair order is definite. If it is impossible to accurately determine the nature of the trouble a tear down operation is sold. Then when the trouble is revealed and the order given to proceed with the work there is no additional charge for the preliminary tear down as that then becomes a part of the complete operation. However, should the customer decide not to have the work done a charge is made for the labor of tearing down and reassembling the part.

Advantages Resulting from Flat Rates

"Flat rates were put in effect in our Minneapolis branch, which is the headquarters of our organization, in 1923. The service business for 1924 showed an increase of 40 per cent over that of 1923. In 1925 there was a still further increase in business, amounting to 45 per cent over 1924.

"Even with this increasing business it was possible to decrease our mechanical force 40 per cent. The result of all this meant real profit, as there was no increase in floor space, or overhead and the payroll has been substantially reduced in spite of the fact that each man is making more money than he had ever received before."

EDITORIAL

Authentic Information for Dealers

SELLING arguments of many automobile dealers and salesmen are undergoing interesting revisions. This is the season of the year for that.

The tone and direction of many of these sales talks change more or less at this time because of innovations incorporated in new models of cars.

It is highly important for all competitive tradesmen to know what these changes are. Wide awake dealers follow them closely. They want first hand information as to what new features have been introduced and what old ones have been abandoned.

They want uncolored and unbiased descriptions of these news cars—not general publicity prepared for the columns of daily newspapers and public consumption.

What the tradesman demands in this respect requires the talent not only of trained writers but automotive engineers of first water.

MOTOR AGE has on its staff such writers and such engineers. They know their stuff and they are writing about the new 1927 models as the introductions are released. Three articles describing new models appeared in last week's issue of MOTOR AGE. We are not afraid to vouch for their authenticity—nor of other such articles that will appear from time to time.

You can't bid recklessly against a competitor in the automotive fraternity without bidding against yourself.

Ask for the Order Early

A SALESMAN who has a remarkable record for booking new car orders says he always makes it a point to "ask for the order" as soon as possible during an interview with a prospect. No doubt there is a wrong time to ask for the order but without doubt the right time is the first convenient moment. Following this plan is a good way to quickly eliminate the shopper and to make an issue of the real point with the serious customer. Where many salesmen lose out is by failing to ask for the order at all. It is better to be awkwardly early with this suggestion than wait too long. Try the other plan. Ask 'em early.

"Discount" is merely a business term. What it means to the dealer depends on business management.

Staging the Introduction

MANY dealers will want to make the best of new model introductions this year as usual. Some already have had their formal shows. Others have these events ahead of them. Some of the dealer introductions we have observed have been very impressive—the kind that cause the public to pay serious attention. Others to which our attention has been attracted have been very tame. They have been handled too much as every-day affairs.

There always is opportunity at such a time for the dealer to make a good bid for public notice. The more

he "puts on the bells" the more apt he is to make people stop in and look over the new offerings. Then the profit of it all depends upon how the visitors are handled. Doing things to get the crowd is only a part of the program. The successful introduction is the one wherein this initial step is followed with a well organized merchandising program. The dealer who thinks shooting off fireworks, sending up balloons and packing the place with visitors ends the necessary effort is overlooking the chief essential of the whole movement. Here are the two steps:

Have a plan to get the crowd.

Then have a plan to sell them.

The introduction period can be made a period of real profit. Its importance cannot be made too emphatic. Dealers who treat the introduction of new models in an unenthusiastic way cannot expect the public to enthuse much over their lines of cars.

All prospects are not ripe ones but a good salesman can make them that way.

Protecting the Dealer

THE time was when it was possible for an individual to walk in to many of the large wholesale automobile supply houses and make purchases for his personal use. A recent instance reported to MOTOR AGE indicates these supply houses are recognizing the injustice of this practise and are taking steps to protect the regularly established repairman and dealer and help him to get the profit which is justly his.

It will be well when no parts are sold at a discount without a regular purchase order or other identification to prove conclusively that the discount is merited.

Salesmen who shoot higher than their quotas are good marksmen just the same.

When a Service Customer Comes Back

MOST service shops are well acquainted with the service customer who comes back to kick. But very few shops are capitalizing this customer as they should. The reliable shop that guarantees its work always goes as far as it can to satisfy any reasonable complaint of a customer, and when such a policy is intelligently administered the result is to the advantage of the business.

But whenever any shop holding itself out as standing behind its work makes good on a complaint only under protest and in a reluctant and half-hearted way it is no better off than if it had refused to make good.

The policy of making good on complaints is worth while only if carried out in a cheerful, willing and whole-hearted manner. If a customer comes back with what he believes is a grievance and is met with excuses and alibis, naturally he loses confidence in the establishment and probably builds up an unfriendly feeling that later attempts of the shop to give full satisfaction cannot entirely overcome.

Satisfaction grudgingly given is no satisfaction at all.

SALES STILL WELL ABOVE

Midsummer's Recession Less Sharp Than Usual

Current Season Considered Probably Best Makers Have Experienced

NEW YORK, Aug. 2.—Sales of new cars and trucks, while showing the normal mid-summer recession, are still well above the same period a year ago in the majority of lines. One or two of the important producers that had a rather unsatisfactory first half-year as compared with the first six months of 1925, are showing good gains in the current market. All factors considered, the season is probably the best that the manufacturers have ever experienced.

Excellent agricultural and industrial conditions are proving the most potent source of the continued demand for new vehicles. In the Kansas City territory, for instance, the great wheat crop, coupled with higher prices, has radically changed the outlook for late fall and summer business in automotive lines. The money from the crops is already flowing into banks and trade channels, and automobiles and trucks are perhaps gaining more than other lines from the unusual prosperity.

Sales throughout the South are in good volume, despite such unfavorable developments as the bank failures in Georgia and the depressed state of the textile industry in the Carolinas. Here again it is the farmer's wealth that has turned the scales.

Although some betterment in the used-car situation is noted in current sectional reports, the fact remains that heavy stocks of both new and used cars, which have been general most of the year so far, have rendered satisfactory profits extremely difficult of attainment.

Profits by Studebaker

SOUTH BEND, July 29.—Net profit of \$4,706,940 after depreciation, Federal taxes and all charges, is shown by Studebaker Corp. of America for the quarter ended June 30. This compares with \$4,028,920 in the preceding quarter and with \$6,516,268 in the second quarter of 1925. Net profit for the half year of 1926 totaled \$8,735,861, as against \$10,122,048 in the first six months of 1925.

Net sales of the corporation in the first six months of 1926 were \$75,840,607, as

against \$86,569,763 for the 1925 half-year, and \$71,106,226 in the first half of 1924.

The balance sheet as of June 30 shows total assets of \$132,334,756 as against \$132,588,002 on June 30, 1925. Inventories total \$26,575,296 as against \$24,114,044, cash is \$14,551,740 as against \$12,849,480, sight drafts \$1,710,873 as against \$4,627,092, and receivables \$6,729,996 as against \$10,999,837. Surplus is shown as \$37,183,350 as against \$26,293,539.

Cadillac's Silver Anniversary

DETROIT, July 30.—When the Cadillac Motor Car Co. introduced its new line of cars, it marked the opening of the company's silver anniversary year.

Preparatory to the announcement of 50 types and styles and 500 color and upholstery combinations, Cadillac distributors from all over the United States attended a convention at the plant in Detroit and witnessed the largest exhibition of cars of a single make ever held under one roof. The exhibit, which was held in the new administration building, which is now nearing completion, was kept open for the public for several days, during which thousands viewed the new line.

Link-Belt Conference

CHICAGO, July 29.—The Link-Belt Co. held its sixteenth Drive Chain Conference here recently at the Dodge Works. James S. Watson, general manager of the Dodge plant and of the Drive Chain Division, presided.

Three days were taken up with round table discussions regarding better methods of serving, and of increasing sales. Fifty sales representatives from all sections of the country attended.

Lilly Radiator Expands

ALTOONA, Pa., Aug. 2.—J. R. Lilly, proprietor of the Lilly Radiator Works, has expanded his business by establishing a new plant at 2324-26 West Ninth Avenue. A new concrete building was erected for the new location and it has been occupied. The building is 25 by 50 feet in size and is divided into three sections, an office, welding and general service room with drive-in facilities. Considerable new equipment has been installed in the new home.

Mulch Steps Out

FLINT, July 29.—R. H. Mulch, vice-president and general manager of the Flint Motor Co., and some other operating heads are retiring from the company as a result of the sale of the plant here and the decision to concentrate operations at the Elizabeth plant under Colin Campbell, vice-president of Durant Motors, Inc.

Reo Builds Shipping Unit

LANSING, July 29.—The Reo Motor Car Co. is constructing a large shipping unit, three stories in height and having a floor area of approximately 8 acres. Shipping docks 600 feet in length with loading facilities on each side are also being built and the entire project will be finished by the middle of September.

The building requires more structural steel than any other building ever erected in Lansing, approximately 60 carloads being used, besides three carloads of steel sash for the windows. The building will have 30,000 square feet of window space.

Wood blocks are being used to finish the two lower floors while finish maple flooring is used on the third floor.

English Situation Pleasing

DETROIT, July 29.—H. H. Springfield, vice-president of Dodge Brothers, Inc., has returned from a business trip to England. The fact that business conditions were so good in spite of the duration and magnitude of the coal strike, impressed him very much, he said. This and the recent general strike had led him to expect a much more discouraging outlook and he was agreeably surprised.

"Dodge Brothers sales in England are more than satisfactory," he declared.

Fisk Hurries Building

MILWAUKEE, July 29.—Work is being pushed by the Fisk Rubber Co. on a large addition to its Milwaukee plant, known as the Federal Rubber Co. division, and located in Cudahy, a suburb of Milwaukee. The building will be six stories high, 66x286 ft., and is an extension to the main factory. The work is under the direction of G. P. Allen, Fisk engineer, New York. George J. Mead is chief plant layout engineer at Cudahy.

Knauss Changes Positions

DETROIT, July 29.—Stanley E. Knauss, general superintendent of the Stout Metal Airplane Co., division of the Ford Motor Co., has resigned to become general manager of the Stout Air Services, Inc., which is opening its first passenger line between Detroit and Grand Rapids.

Mr. Knauss has been with the Stout organization for a long time, and has had a big part in the development of aircraft. He will have offices in the General Motors Building.

Working Fast at Velie

MOLINE, Ill., July 29.—Production at the Velie Motors corporation plant continues at between 30 and 35 closed jobs daily. All these machines are shipped as rapidly as turned out, those not going out by rail being driven away from the shops.

VOLUME ATTAINED YEAR AGO

Three New Star Bodies

NEW YORK, Aug. 2.—Three new body models appear in the Star line for 1927. They consist of a convertible roadster on the four cylinder chassis listing at \$550, a sport coupe on the six listing at \$995 and a five passenger sedan on the six listing at \$975. The price of the four cylinder touring has been increased from \$540 to \$550. Other prices remain unchanged.

Star has added a one-ton, six-cylinder truck to be known as the "Compound Fleetruck." The chassis is listed at \$975.

The chassis of the four cylinder passenger car remains as it was although changes have been made in the six. These apply chiefly to the engine. The oil pump has been made larger and main bearings now used are of the bronze-back babbitt lined interchangeable type. Also the cast iron pistons used formerly have been replaced with Bohnalite aluminum alloy pistons of the Nelson type. The pistons are the same as those used in the Star four.

Alterations have been made in tops of both open and closed models by forward extensions to provide a visor. This effect with the double belt molding gives the cars a longer appearance. The fours are Persian blue with black moldings while the sizes appear in several striking combinations.

Following are the two lines and prices:

Four Cylinder

| | |
|----------------------------|-------|
| Convertible Roadster | \$550 |
| Touring | 550 |
| Coupe | 675 |
| Coach | 695 |
| Sedan | 795 |

Six Cylinder

| | |
|-----------------------------|-------|
| Touring | \$725 |
| Coupe | 820 |
| Sport Coupe | 995 |
| Coach | 880 |
| Sedan | 975 |
| Landau Sedan | 995 |
| De Luxe Sport Roadster..... | 910 |
| Fleetruck chassis | 975 |

A full description of the 1927 Star lines will appear in the next issue of MOTOR AGE.

Housing Problem for Flint

FLINT, Aug. 2.—The General Motors Corp. will not enlarge its housing program to take care of the tremendous increase in population which will result from the corporation's extensive expansion program for this city, according to Harry H. Bassett, president and general manager of the Buick Motor Co.

Establishment of a Fisher body plant in the factories previously occupied by the Flint Motor Co. and expansion of the Buick and Chevrolet will increase the population of Flint 60,000 inside of two years, Mr. Bassett estimates.

In a letter to the Flint Real Estate Board, he declared that realtors and

financial interests of the city must prepare to provide the housing facilities to take care of the influx of thousands of persons. General Motors will continue to build homes in its residential development on the west side, but the program will be of minor importance when compared to the entire situation. Mr. Bassett declared that the corporation will not build any houses in the vicinity of the Fisher plant, which is located on the south side.

Seeks Ideas in Europe

CLEVELAND, O., Aug. 2.—Vice-President J. R. Hall of the Chandler-Cleveland Motors Corp. is now on an extended trip throughout Europe, where he is combining pleasure with business by taking a vacation-educational trip.

"Although I realize that American motor car manufacturers are far ahead of European automotive builders in production economies, I feel that we all have something to learn from Europe's finest builders in painstaking, precision craftsmanship, and I intend to visit the more important manufacturing plants of Great Britain, France, Italy and Germany before I return in September," said Mr. Hall as he left factory headquarters for his vacation-educational jaunt. Vice-President Hall, who is in charge of production, expects to bring back a few details in fine car building which Chandler and Cleveland can utilize.

Conditions in Florida

CLEVELAND, Ohio, Aug. 2.—Harrison Goldsmith, southern sales manager of the Chandler-Cleveland Motors Corporation, has returned to factory headquarters in Cleveland after a trip throughout the southern territory. "Business conditions in Florida are not as bad as they have been painted," said Mr. Goldsmith upon his return.

"Some deflation has taken place, it is true, but the greatest loss by far in Florida real estate was to the shoe-string operators and 'binder boys.' The conservative, successful investors retained their holdings and are going ahead steadily improving them and making their plans for a bigger and better Florida in 1927.

"Our Tampa and Sanford distributors show a steadily increasing volume that is very gratifying, and they, too, are laying their plans for a very profitable 12-month period."

Olds Price Increases

LANSING, Mich., July 29.—Coincident with the bringing out of the 1927 models, Olds Motor Works has announced price increases of ten dollars each on the De Luxe Sedan and the De Luxe Coach. These models now list at \$1125 for the De Luxe Sedan and \$1150 for the De Luxe Coach.

Chandler Lowers Prices

Cleveland, O., Aug. 2.—The 1927 Chandler line was displayed here last week before a large convention of dealers and other representatives of the Chandler-Cleveland Motors Corp. In the two-day business and get-together session those attending were shown the new Chandler Big Six, Special Six and Standard Six cars. Announcement was made of a price reduction affecting the Big Six line ranging from \$60 to \$360. There are 19 different models in the three lines, as follows:

Big Six Series

| | |
|---------------------------------|--------|
| 5-p Sport Touring..... | \$1545 |
| 7-p Touring | 1645 |
| 2-4p Roadster (Rumble Seat).... | 1695 |
| 7-p Sedan | 1795 |
| 5-p 20th Century Sedan..... | 1495 |
| 5-p Metropolitan Sedan..... | 1595 |
| 4-p Coupe | 1675 |

Special Six Series

| | |
|------------------------|--------|
| 5-p Touring | \$1145 |
| 5-p Sport Touring..... | 1295 |
| 2-p Coupe | 1195 |
| 2-p DeLuxe Coupe..... | 1285 |
| 5-p Sedan | 1295 |

Standard Six Series

| | |
|---|-------|
| 5-p Touring | \$945 |
| 5-p De Luxe Touring..... | 1005 |
| 2-p Coupe | 1035 |
| 2-p De Luxe Coupe..... | 1125 |
| 5-p Sedan | 995 |
| 5-p De Luxe Sedan..... | 1095 |
| 2-4p Sport Roadster (Rumble Seat) | 1135 |

Mechanical four wheel brakes and the "One Shot" lubrication system will be standard equipment on all Chandler models. Other mechanical innovations include air cleaner, oil filter and a new Motorstat. Detailed description of the new models will appear in the next issue of MOTOR AGE.

Reduction Helps Ford

DETROIT, July 29.—That the recent price cut in Fords stimulated sales, is indicated in figures for Detroit, for the first six days of July. During that period Ford sales decreased only 13 over the corresponding period in June, while other makes following the usual seasonal decline for this period of the year, showed more pronounced decreases. Ford sales for the first six days of July were 447 and for the corresponding period in June were 460.

To Double Plant Capacity

QUINCY, Ill., July 31.—The Gardner Governor company plant has started improvements, estimated to cost \$500,000, which will double the capacity of the plant through expansion of the foundry department and pattern section. The foundry will be 100x300 feet, fireproof and modern in design. The pattern section will be two stories high, 55x130 feet, and built to carry a third floor if desired.

Gray Assets Are Sold To Bartel Associates

**Say Creditors Will Receive
From 30 to 35 Cents on
the Dollar**

DETROIT, July 31.—The real estate, equipment and other assets of the Gray Manufacturing Co. have been sold to a group of purchasers represented by Theodore Bartel. As a result of the sale creditors will receive from 30 to 35 cents on the dollar.

Besides assuming indebtedness of the corporation for \$940,000 the purchasers also paid \$175,000 in cash which will be pro rated to satisfy claims of merchandise creditors totaling \$207,000 and commitment creditors with claims approximating \$350,000.

The sale was negotiated by L. E. Deeley, manager of the adjustment bureau of the Detroit Association of Credit Men, as trustee for all the creditors. The creditors' committee was composed of E. R. Ailes, Detroit Steel Products Co.; W. R. Cogger, American Bosch Magneto Co.; C. W. Dickerson, Timken-Detroit Axle Co.; L. J. McSweeney, E. S. Evans Co., and Henry E. Mead, American Motor Body Corporation.

The \$940,000 debt assumed by the purchasers follows: First National Bank,

\$215,000; Kelsey Wheel Co., \$200,000; Benjamin F. Dansard (mortgage on bond issue), \$475,000; real estate, personal excise taxes and all preferred claims in arrears under the mortgage, \$50,000.

In the opinion of the committee, the offer is far in excess of any amount that could probably have been realized from a forced sale of the assets in bankruptcy, and the opinion was expressed that had the matter been handled in bankruptcy proceedings that creditors would have been fortunate to realize 10 cents on the dollar.

The Gray plant is located at Mack Avenue and Grand Trunk Railroad.

New Pierce Branch

NEW YORK, July 29.—Assets and good-will of the Harrolds Motor Car Co. in West 54th Street near Broadway have been taken over by the Pierce-Arrow Sales Corporation, which will continue the distribution of Pierce-Arrow cars at that place as a factory branch. The Harrolds company was one of the oldest in the New York territory, having been formed 20 years ago under Harry Unwin to distribute the Oldsmobile.

Racheff Named Engineer

RACINE, Wis., July 26.—Ivan Racheff has been appointed metallurgical engineer of the Racine Radiator Co., in connection with chemical and metallurgical research with respect to power units, industrial, truck and heavy duty radiator manufacturing.

Ten World's Records Are Smashed by Renault Six

**American at Wheel as New
Mark for Two Rounds of
Clock Is Set**

PARIS, July 16.—(By Mail.)—Averaging 107.9 miles an hour for a period of 24 hours, a six-cylinder Renault, driven by the American engineer, Garfield, and the Frenchmen, Plessier and Guillon, has beaten the world's record for two rounds of the clock by more than 12 miles an hour. The successful attempt was made on Montlhery track, near Paris, with a modified stock Renault measuring 4.3 by 6.9 in. bore and stroke (piston displacement 556 cubic inches), having a fabric leather sedan body with two seats in tandem. Stops were made every hour for tire changes.

By this performance the Renault broke ten world's records for distances from 500 miles to 4,000 kilometers, and for 6, 12 and 24 hours. The average speed for the first six hours was 109.1 miles, for twelve hours 107.4 miles, and 107.9 for the twenty-four hours. The last lap was covered at an average of 118.74 miles an hour.

Several English firms were preparing to make an attempt on the twenty-four hour record, which stood at 95.03 miles an hour, but the success of the Renault has decided them to abandon their projects.

St. Louis Plant in High

ST. LOUIS, Mo., July 29.—The St. Louis Chevrolet plant is playing a big part in the increased production of that company. With three assembly lines running the total daily production here is around 800 cars. Lack of adequate loading and unloading facilities is the only thing that has prevented the local plant from breaking all its own records to an even greater extent than it has.

In June the Chevrolet factories built 77,241 cars and trucks of which 16,789 were built in St. Louis.

During the first six months of this year, 384,573 Chevrolets were built, 80,327 being built in St. Louis.

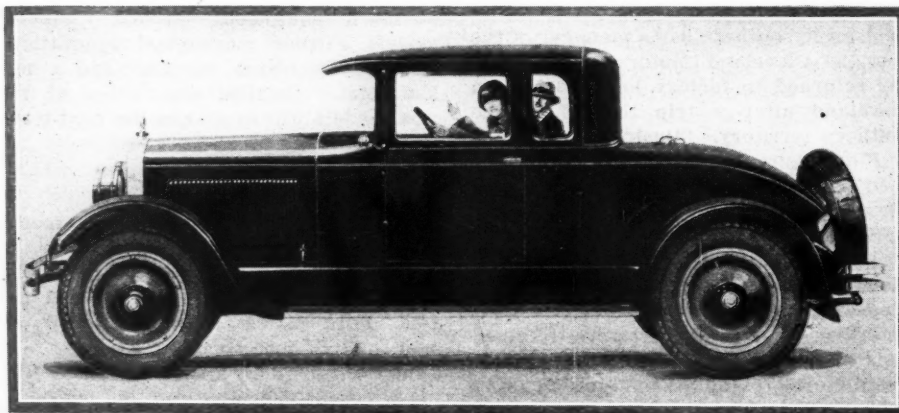
New Work for Kanzler

DETROIT, July 29.—Ernest Kanzler, brother-in-law of Edsel Ford has resigned as vice-president of the Ford Motor Co., and will devote his time in the future to personal work for Henry and Edsel Ford.

Announcement of his resignation was made by Edsel Ford, president of the Ford Motor Co.

"His broad experience in various parts of the business has especially fitted him for this particular work," said Edsel Ford, "the announcement of which will be forthcoming-later."

Latest Addition to Peerless Family



Peerless "6-80" roadster-coupe

The Peerless Motor Car Co. Cleveland, O., is in production of a new body style in the "6-80" model roadster coupe that is different in type from any model being built by the company.

The new roadster coupe has all of the improvements that Peerless has added to its other models. A rumble seat in the rear allows space for the seating of two persons. One of the novel features is an arrangement which allows the window in the rear of the front seat to be lowered as are the side-windows, thus permitting conversation between the occu-

pants of the front and rear seats.

A ledge in the rear of the front seat provides space for storing small packages.

It is an exceptionally low car. This lowness gives it the appearance of being long, but the wheel base is but 116 inches, which permits easy handling and parking.

The new model is equipped with four wheel hydraulic brakes. It has lacquer finish for the entire car, including fenders and hood. There is a Purolator and an improved steering gear.

1925 Industry's Greatest Year, Notes Year Book

Commerce Department Speaks Glowingly of Automotive Activity Last Year

WASHINGTON, July 29.—The year 1925 is credited with being a record one for the American automotive industry when a greater number of automobiles were produced and a much greater number exported than in any preceding year, in the official Department of Commerce Year Book for 1925, just made public here. It is set forth that production of passenger cars, trucks and buses amount to 4,314,746 units, an increase of almost 220,000 units, or 5 per cent over the record of 1923. The value of all automotive products exported from the United States and Canada was approximately \$374,000,000, an increase of 48 per cent over the preceding year.

"Exports of cars and trucks (complete or chassis but not counting the very large number of 'assemblies')," continues the summary of the automotive industry, "from the two countries, excluding exports from one to the other, numbered 361,291, over 60 per cent more than in 1924; the proportion of total production exported was greater than in any other year.

"Other features of the year were: Price reductions on practically all makes and models, the great increase in closed-car production and sales, and the gains in motorcycle and aircraft production and exports over 1924.

"The number of cars and trucks registered reached very nearly 20,000,000 in 1925, an increase of 13 per cent as compared with 1924."

G. M. Net Sets Record

NEW YORK, July 29.—Net earnings of General Motors Corp. in the first six months of the year aggregated \$93,285,674, its volume of business and earnings in this period being the highest in its history. Earnings in the first half of 1925 were \$50,363,099. In the 1926 period each of the corporation's units established new high records, according to A. P. Sloan, Jr., president.

The balance sheet as of June 30, which will be issued shortly will show cash and marketable securities of about \$195,000,000, Mr. Sloan said. This statement will include the properties acquired by consolidation with Fisher Body Corp. While the earnings applicable to the 40 per cent minority interest in the Fisher corporation outstanding during the first six months were not consolidated with the earnings of General Motors, "it is nevertheless of interest to note," said Mr. Sloan, "that the combined net earnings of the two corporations for this period aggregate \$101,699,954."

"The strength of the corporation and its improved earnings position at this time," Mr. Sloan said, "are due to the influence of several factors. Certain operations which heretofore have not attained their full earning capacity have now come into strong position. Sales of the corporation's products reflected through every operating division show substantial increases in volume. The car divisions show an increase of 56 per cent in retail deliveries over the corresponding period a year ago. The Delco-Light company, reflecting increased sales of Frigidaire, has also contributed materially to the general result, as has the expansion of the operations overseas."

G. M. Closed Car Ratio

DETROIT, July 29.—Closed car sales by General Motors Corp., during the first five months of 1926 average 79.8 per cent.

Of all cars sold by the corporation in May, 79 per cent were closed cars, compared with 59 per cent in May 1925, 41 per cent in 1924, 38 per cent in 1923 and 19 per cent in 1922.

The percentage by months for the past four years follow:

| | 1926 | 1925 | 1924 | 1923 | 1922 |
|-------------------|------|------|------|------|------|
| Jan. | 84 | 47 | 42 | 34 | 29 |
| Feb. | 82 | 54 | 38 | 35 | 29 |
| March | 78 | 60 | 38 | 36 | 25 |
| April | 76 | 61 | 42 | 40 | 22 |
| May | 79 | 59 | 41 | 38 | 19 |
| June | 58 | 37 | 35 | 26 | |
| July | 54 | 37 | 31 | 26 | |
| Aug. | 62 | 40 | 30 | 31 | |
| Sept. | 66 | 42 | 35 | 37 | |
| Oct. | 70 | 52 | 38 | 24 | |
| Nov. | 73 | 71 | 42 | 30 | |
| Dec. | 77 | 67 | 44 | 39 | |
| Pct. for Year.... | 63 | 43 | 37 | 28 | |

The comparison includes Chevrolet, Pontiac, Oldsmobile, Oakland, Buick and Cadillac.

Ford 63 Years Old

DETROIT, Aug. 2.—Henry Ford was 63 years old Friday, July 30. He celebrated the event by returning to his home in Dearborn, from Traverse City, his summer place.

During August Mr. Ford will remain at his Dearborn place and will consider plans for his annual motor trip with Thomas A. Edison and Harvey Firestone. An invitation was recently extended to the party to rough it in the Ozark mountains of Missouri, but no location has been chosen yet.

Ben P. Milnes a Distributor

SEATTLE, Wash., July 29.—Ben P. Milnes, recognized as the oldest used-car dealer in Seattle in point of years service, has been granted the distributing franchise in the Pacific Northwest for Chandler and Cleveland cars. The new arrangement is now in effect and terminates one of the most widely known used-car businesses on the Pacific coast.

The company, which is known as Ben Milnes, Inc., will maintain a staff of 12 salesmen, and will continue its slogan which has built up a nice business, "The House That Truth Built."

Open Equipment Mart to All Reputable Makers

Much Broader Exhibition Policy for Permanent A.M.A. Show Announced

CHICAGO, Aug. 2.—The Automotive Manufacturers' Association, sponsors for the Automotive Equipment Mart at 1315 South Michigan Avenue, Chicago, Ill., about Aug. 9, will announce a new and broader policy with reference to the maintenance and operation of the mart. John W. Anderson, president and general manager of the Anderson Company, Gary, Ind., who heads the new mart control committee of the A. M. A., in an interview says it has been decided that hereafter any reputable manufacturer of automotive equipment, accessories, parts or supplies may maintain a permanent exhibit in the Automotive Equipment Mart.

The privilege of exhibiting has heretofore been restricted to the members of the A. M. A., and, while a very creditable showing has been made, it is regarded as certain that the new policy, which will open the mart on equal terms to a field of some two or three thousand manufacturers, will quickly multiply the size and prestige of this enterprise.

"The new operating policy to be announced will establish the mart definitely as an institution dedicated in the broadest sense to the service of the automotive industry at large, and clearly defines the policy of the Automotive Manufacturers' Association as constructive, rather than restrictive," says Mr. Anderson. He declares further that the widespread interest evidenced on the part of manufacturers and jobbers since the announcement of the new policy fully justifies the most optimistic hopes of the sponsors of the new program.

It is stated also that the mart already is recognized in foreign automotive circles as offering excellent buying facilities for American lines. Reputable foreign buyers in considerable numbers have visited the mart during the past year, and many substantial and profitable foreign connections have been formed by manufacturers through their exhibits.

Domestic buyers are finding the mart a great convenience and many of them are making full use of its facilities, says Mr. Anderson. This they may do at their convenience, inasmuch as the mart is open to the trade fifty-two weeks in the year.

The Mart Control Committee, of which Mr. Anderson is chairman, has as members Mr. Joseph F. Berthold, Felt Products Mfg. Co.; Mr. E. H. Henley, Hill Products Corp.; Mr. H. E. Patterson, Warner-Patterson Co.; and Mr. Noah Van Cleef, Van Cleef Bros.

Show Managers Plan for Shop Equipment Exhibits

Working Displays of Garage Machinery Will Be Made in Many Cities Next Year

CHICAGO, Aug. 2.—As an outstanding result of the annual before-show convention of the National Association of Automobile Show and Association Managers, here last week there will be greater and more constructive working exhibits of automotive service shop equipment at all the 1927 automobile shows in the larger cities. The major feature of the program was the development of this exhibit to its greatest usefulness and plans are under way to make next year's exhibits more definitely useful to the trade and to the public in every way.

Last year's experience in three shows, Cleveland, Philadelphia and Milwaukee, served to show what may be done with working shop equipment exhibits, and it was the success of these exhibits that moved the National Shows in New York and Chicago to an extension of the idea in both of the national exhibitions.

W. H. Metcalf, manager of the Philadelphia show gave a very comprehensive explanation of the methods he used in promoting the shop equipment that proved so successful in his show this year, the manner of staging the exhibits, how it was promoted to the trade and public and the concrete results. He was followed by Bart J. Ruddle, manager of the Milwaukee show, and Neal G. Adair, manager of the show department of the Motor and Accessory Manufacturers' Association, each of whom outlined plans for the better exhibition of shop equipment in the various sectional shows.

Used car merchandising methods of the more modern type were discussed at length. A. V. Comings, editor of Automobile Trade Journal and secretary-manager of the association, was the principal speaker on this topic.

New Federal Body Plant

DETROIT, July 29.—A factory with a capacity for 50 bodies a day has just been put in operation by the Federal Motor Truck Co., and is operating at full production.

A large metal stamping division has been installed, and is making all metal goods for the full line of bodies and cabs which are designed for use on the Federal chassis.

The body building division is one of the big features of the Federal plant, according to M. L. Pulcher, president. He points out the difficulty that is often experienced in buying standard made bodies to fit all makes of truck chassis, such as interference with steering wheels, pedals, difficulty of the driver getting in and out of the left hand side.

Bodies built by Federal are designed for use on the Federal truck chassis and careful attention has been given to the comfort of the driver.

Kitterman Sells Velie

DENVER, Colo., July 29.—Chas. F. Kitterman has taken the position of general sales manager for Velie cars in this territory, and is in active charge of the retail establishment at 130 West Fourteenth Avenue. Mr. Kitterman came to Denver from Detroit, where he was territory representative for Dodge Brothers.

Blaze at Hayes Wheel

JACKSON, July 29.—Plant No. 1 of the Hayes Wheel Co. suffered a \$2,500 fire loss recently. The fire broke out in the conveyor lead house, and for a time threatened the plant.

Four Production Records Are Broken by Oakland

July High Speed Month for Both Makes of Cars at Pontiac Plant

PONTIAC, Aug. 2.—The Oakland Motor Car Co., during July, set four important production marks of which two were new records on Pontiac six production and the others marked new achievements for Oakland six.

From Jan. 1 to July 23, more than 39,000 Pontiac sixes were produced and distributed to dealers, which it is claimed establishes a new world's record for a new make of car for a corresponding period of time, and also exceeds the largest production ever attained by any new make during its first full year.

Besides Pontiac's success, Oakland has rounded out its greatest fiscal year, which ends July 31, by more than doubling sales, and exceeding by several thousand cars the largest previous year in its history for Oakland six alone.

Total production for the fiscal year exceeded more than 100,000 cars.

Daily production of Pontiac cars is being maintained at 450, pending completion of the new \$7,600,000 factory which will permit a production of 1,000 of these cars a day. This places Oakland in eighth place in production and sales among motor car manufacturers of the world.

Represents Chevrolet

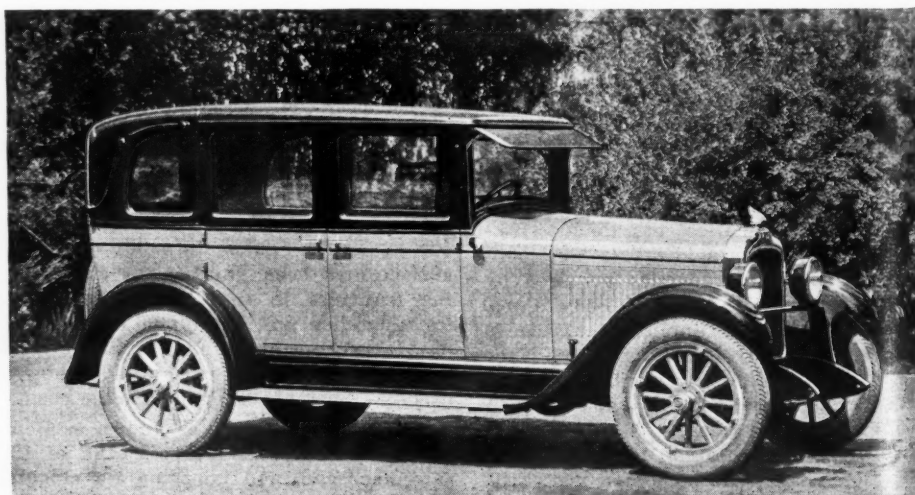
SEATTLE, Wash., Aug. 2.—George Wales has been appointed territorial representative for Chevrolet, with headquarters at Seattle. He succeeds Abe Parker, who becomes assistant general sales manager in the Pacific Northwest.

Pontiac Adds 4-Door Landau Sedan

A LANDAU sedan listing at \$895 has been introduced to the Pontiac line to act as a companion car to the two-door sedan and coupe models. This represents the first addition which has been made to the line since the Pontiac was introduced by the Oakland Motor Co. last winter.

This model has a Fisher body finished in dark Green Duco with the upperstructure and fenders contrasting in black.

Standard equipment on this model includes: Rear roller shade, dome light, robe rail, invisible door checks, cowl lights, rear view mirror, automatic windshield cleaner, nickel-plated radiator shell with Indian Head radiator emblem. Other features are Fisher "VV" one-piece windshield, sun visor with nickeled support bracket and nickeled headlight rims.



The New Pontiac Four-Door Landau Sedan, Listing at \$895

A.E.A. Gets Ready for New England Campaign

Eleven Big Meetings Slated for Months of September and October

CHICAGO, Aug. 2.—Highly satisfactory progress is being made in the movement to put the Automotive Equipment Association's merchandising program into effect in New England, according to Arthur R. Mogge, A. E. A. merchandising director. Plans for the program were initiated at a meeting of fifty jobbing and manufacturing members of the A. E. A. at the Athletic Club in Boston recently on which occasion Mr. Mogge outlined the accomplishments in other sections of the country and offered suggestions in connection with the work in the New England states.

A series of meetings starting Sept. 14 and running through October are to be held at important New England jobbing points. Local jobbers and manufacturers are to share alike in the responsibilities of these meetings while in order to insure good attendance jobbers will call personally on the heads of car distributing organizations urging them and their dealers to attend.

Henry Kirkland, of the A. E. A. merchandising staff, will represent the association on each of these programs and at the conclusion of each meeting he will spend several days giving special merchandising assistance to individual dealer organization. The New England schedule with names of local chairmen for the meetings follow:

Sept. 14, Boston, Mass.—F. J. Murray (Chairman), Post & Lester Co.
Sept. 17, Providence, R. I.—H. E. Chaffee (Chairman), Belcher & Loomis Hdwe. Co.
Sept. 20, Portland, Me.—W. L. Lunt (Chairman), James Bailey Co.
Sept. 22, Auburn, Me.—C. E. Bailey (Chairman), Darling Automobile Co.
Sept. 24, Bangor, Me.—H. W. Libbey (Chairman), N. H. Bragg & Son.
Sept. 27, Worcester, Mass.—G. W. Fleming (Chairman), Fleming Machine Co.
Sept. 30, Springfield, Mass.—F. W. Eatters, (Chairman), Tarbell Watters Co.
Oct. 4, New Haven, Conn.—O. R. McDonald (Chairman), American Chain Co.
Oct. 7, Hartford, Conn.—C. B. Lamp (Chairman), Post & Lester Co.
Oct. 11, Burlington, Vt.—H. H. Hagar (Chairman), Hagar Hdwe. & Paint Co.
Oct. 14, Manchester, N. H.—A. S. Hunt, (Chairman), Linscott Supply Co.

Mr. McDonald was put in charge of the publicity committee while Mr. Fleming heads the committee to secure speakers.

Among the rousing A. E. A. merchandising meetings recently were those at Davenport, Ia., Greenville, O., and Columbus, O.

5,362 Tourist Camps in United States

SAN FRANCISCO, Cal., July 29.—California leads the states of the Union in number of tourist automobile camps, having 996, according to statement by

Lewis Is Named Assistant Sales Head for Cadillac



William W. Lewis

DETROIT, July 26.—William W. Lewis, advertising manager of the Cadillac Motor Car Company, has been promoted to the newly created position of assistant general sales manager and director of advertising, according to an announcement by H. M. Stephens, Cadillac general sales manager. In his new position Mr. Lewis will assist Mr. Stephens in the conduct of all activities in the sales division of the company's organization, which includes the sales, advertising, parts and technical departments. The new position has been created as a result of the rapid increase in Cadillac sales during the past twelve months, requiring an enlarged sales organization.

The newly-appointed sales executive joined the Cadillac organization as district sales manager in August, 1922, and advanced to advertising manager in November of the following year.

the California State Automobile Association. Only recognized camps, where standards of sanitation, water service and fire protection are maintained, are counted. There are 5,362 such camps in the United States, and it is estimated that 20,000,000 motor tourists will make use of them this year.

Colorado is second in number with 276; Wisconsin third, with 226, and Texas fourth, with 219. Delaware is last, with only one camp, while Rhode Island and the District of Columbia are tied for next to last place with five each.

Directs Larkin Sales

DAYTON, July 29.—The Larkin Automotive Parts Co. announces that Richard K. Flanagan has been appointed sales manager. He has spent 15 years in the automotive equipment industry.

Seiberling Gives Reasons For Tire Price Reductions

Renewed Operations by Many Small Plants Are Held Partly Responsible

AKRON, O., Aug. 1.—In a signed statement in Seiberling News for Seiberling dealers, F. A. Seiberling, president of the Seiberling Rubber Co., gives two reasons for the recent substantial reduction in tire prices.

In the first place, he states, the recent lower price of crude rubber has enabled numerous small tire factories that had been idle or doing little for a year or more to again enter the field with a product manufactured from cheap rubber and make a strong bid for some of the business of the larger manufacturers who, because of the volume of their operations, are still working up rubber bought at higher prices. The larger manufacturers, he says, decided to effectively forestall this competition by impressive price reductions.

In the second place, Mr. Seiberling attributes to the mail order houses some influence toward the price reductions. He states that several of the larger manufacturers are selling tires to large mail order houses who in turn are offering them to the public at prices practically as low as the dealers were able to buy from the manufacturer. "Dealer pressure dictated to these manufacturers that some action was imperative," Mr. Seiberling says in further explanation of the price reductions.

Ban "In Transit" Tags

DETROIT, July 29.—Dealers having occasion to drive new cars away from automobile factories located in Michigan, are warned that they must equip each car with metal license plates.

The Secretary of State has forbidden the use of "In Transit" tags, and even the cardboard tags bearing the dealer's license number are taboo. Dealers calling at factories for cars must bring along a set of metal license tags for each car they intend to drive away.

Another Michigan ruling regarding the manner in which cars are driven away is also recalled. The State Department of Public Safety requests that cars, instead of being driven in a long, continuous string, be driven in groups of three, with 200 feet intervening each group. If such a plan is followed, it is pointed out, much congestion with routine traffic on the road can be eliminated.

Take on Distribution

MILWAUKEE, Wis., July 29.—The Wisconsin Magneto Co. at 500 Van Buren street, Milwaukee has announced that it has taken over the service distribution in Wisconsin for K-W products and also the Wico company.

TRADE ASSOCIATION ACTIVITIES

WILL STAGE AN "OPEN SHOW"

New Accessories Body Formed With Central Headquarters in Chicago

CHICAGO, Aug. 2.—The Automotive Accessories Association is the style of a new organization of manufacturers which has just opened headquarters at 123 W. Madison Street, Chicago. The association has received a charter from the State of Illinois and plans as its first major activity an exhibit which is to be held by its members at the Michigan Avenue Armory from Nov. 8 to Nov. 13 inclusive, which also is the period set for the annual show of the Automotive Equipment Association at the Coliseum.

Arrangements for the Armory display are in the hands of William B. Levey, long identified with the industry in Chicago, who also is serving as secretary-manager of the new association. The tentative organization was launched the first of June at a meeting of manufacturers held at the Morrison Hotel. It is intended to perfect organizations at the meeting to be held during the forthcoming show.

According to Mr. Levey the Automotive Accessories Association is to be national in scope and embrace in its membership manufacturers who can subscribe to an "open show" policy. A circular issued by the association says the show will be open to "all jobbers, mail order buyers, large dealers, wholesalers."

"The purpose of a show," said Mr. Levey should be for the development of business in a manner to benefit both manufacturer and buyer to the fullest extent and that is the purpose of this show. It will be a business show." Arrangements for decorations at the Armory are under way, an Egyptian setting being contemplated. The association has rented 22,000 square feet of display space, and will be able to accommodate 100 booths. The membership will include makers of accessories, parts, shop equipment and supplies. At present the governing body of the association is a committee of "managing directors," who will serve until formal organization in November. The managing directors are: S. M. Dover, Doray Lamp Co., Chicago; H. J. Goldblatt, Arrow Meter Co., Chicago; Lewis Chaps, U. S. Auto Lamp Co., New York City; Ben Warner, Warner Mfg. Co., Chicago. With a membership of 40 so far Mr. Levey predicts a total of 200 by show time.

Membership Is Increasing

CHARLOTTE, N. C., July 29.—The membership of the recently organized Carolina Motor Carriers Association, formed here by a merger of the North Carolina and South Carolina operators of bus lines, is being rapidly increased in a campaign conducted by John W. Hester of Oxford, N. C., secretary-treasurer and attorney for the association. Joel W. Wright of Gastonia, N. C., is president of the association, which was formed here.

Uniformity of state laws relative to the operation of buses is becoming a matter of important concern to the bus operators, some of whom own interstate lines, according to officials of the association. This industry is highly developed in the

two Carolinas, and it was pointed out that the extensions of bus service, now going into operation from time to time, are forced to operate over circuitous routes because previously established lines cannot be paralleled by orders of the state governments.

More Merchandising Meetings

CHICAGO, July 31.—In addition to the list of eleven gatherings to be held in connection with the organization's merchandising campaign in New England the Automotive Equipment Association has tentatively scheduled the following merchandising meetings.

Dubuque, Ia., Aug. 2; Waterloo, Ia., Aug. 5; Scranton, Pa., Aug. 10; Des Moines, Ia., Aug. 12; Omaha, Neb., Aug. 13; Lincoln, Nebr., Aug. 18; Hastings, Nebr., Aug. 20; Asheville, N. C., Aug. 20; Sioux City, Ia., Aug. 24; Birmingham, Ala., Aug. 25; Sioux Falls, S. D., Aug. 27; Little Rock, Ark., Aug. 27.

The Overseas Automotive Club dinner, which is to be a feature of A. E. A. show week in Chicago this fall, will be held Wednesday evening, Nov. 10. This event will be attended by quite a number of overseas manufacturers' representatives and other overseas delegates. N. H. Oliver of the Metal Specialties Manufacturing Company is in charge of arrangements for the dinner.

Dealers Play Golf

DENVER, Colo., July 2.—The annual Auto Dealers' Golf Tournament has just been held at the Lakewood Country Club. Players were divided into four classifications: Motors, Transmissions, Rear Axles, and Exhaust Gas. Mr. Potter, salesman for the Stutz Motors was the winner in the first class, and was awarded the cup presented by the Denver Post. O. L. Davis of the Mountain Motors led in class 2, "Bob" Stovall of the Stovall-Hilliker Ford Agency in class 3, and Mr. Grimsley of the Allison Motors in class 4. F. C. Cullen of the Cullen-Thompson Motor Co. was awarded the consolation prize.

City Asks Raine's Aid

BALTIMORE, Md., Aug. 2.—John E. Raine, secretary of the Baltimore Automobile Trade Association, Inc., has been appointed a member of the executive committee of a commission named by Mayor Howard W. Jackson for the purpose of bringing more visitors to Baltimore. Mr. Raine was appointed to represent the automobile dealers. H. M. Lucius, secretary of the Automobile Club of Maryland, also was appointed to the committee, representing the automobile clubs.

Approve Extra Road Levy

CINCINNATI, Aug. 2.—Directors of the Cincinnati Automobile Club have approved an extra levy of one-half mill tax for three years for improvement of county roads. If such a measure is passed, over 75 per cent of the extra levy will be used for improvement of city streets, which are continuations of country roads.

DISCUSS TRUCK SALES CREDIT

N. F. & W. A. Opposes Long Time for Household Goods Movers

NEW YORK, July 29.—Resolutions directed against the selling of motor trucks on long term payment plans to movers of household goods were passed at the annual meeting of the National Furniture & Warehousemen's Association at Mackinac Island. The resolutions urged careful investigation of credit risks and held that terms of sale should include down payments of at least 20 per cent and the payment of the balance over a period not exceeding 18 months.

Failure to observe these principles, it was declared tended to demoralize the warehousing industry and to cause the public to suffer through poor service and lack of responsibility. The resolutions are being sent to truck manufacturing companies and the National Automobile Chamber of Commerce.

On the matter of time payments, H. L. Gillette of Federal Motor Truck Co. said, "eventually we will get the business to a substantial basis." W. A. Maynard of the White Co., attended the meeting.

Discuss Used Car Evils

DENVER, Colo., Aug. 2.—The entire membership of the Used Car Managers' Association, auxiliary branch of the Denver Automobile Dealers' Association, was in attendance at the monthly dinner meeting at the Shirley-Savoy Hotel. The program consisted of talks by Carl Hulbert, vice-president of Tom Savage, Inc., Oldsmobile dealers, and J. P. LeNoir, salesman for Willys-Overland factory branch retail store. Mr. Hulbert dealt with what he termed "the penalty of overbidding," bringing out some important phases of this prevalent error, and showed that this penalty is not only a loss in dollars and cents, but also in a weakening of the morale of the sales organization.

Mr. LeNoir related the high points of the campaign against this same evil, as conducted in San Antonio, Texas, where he formerly was engaged in the automobile business. Denver dealers feel that the work of the association here, now about a year old, has greatly improved the used car situation, as it has brought co-operation among the local dealers.

Accessory Buyers' Division

SAN FRANCISCO, Cal., Aug. 2.—An accessory buyers' division of the San Francisco Motor Car Dealers' Association has been formed, with William N. Gordon, manager of the accessory department of the Chester N. Weaver Company, as chairman, and L. Girard, of the J. E. French Company, as secretary. Betterment of departmental and merchandising methods in the accessory departments of all the firms in the local dealers' association is the objective of the new division, which meets monthly in the Bellevue Hotel. Men familiar with the local accessory situation are chosen as speakers at each meeting to discuss some one accessory and methods of handling, stocking and merchandising it.

Dealer Orders Speed Up Tire Factory Production

Shipments to Retailers Are Bigger with Slump for Original Equipment

AKRON, O., July 29.—A check of Akron rubber factories reveals that production of automobile tires has gained from 15 to 20 per cent during the past two weeks. Total output has risen to nearly 120,000 casings a day, compared with 100,000 in June and about 85,000 in May.

Owing to the immense surplus of tires which accumulated during the spring and early summer, when unseasonable weather retarded sales, the larger factories are still operating on reduced schedules, and production is below what it was at this time last year. The recent price cuts and warmer weather have brought about expected increases in orders from dealers, but original tire equipment business has declined.

As a result the great plants which supply the motor car makers with the bulk of their rubber requirements have not been able so far to increase their production in proportion to their smaller and medium sized competitors selling their products direct to dealers.

Last year at this time the tire companies were operating at the peak. Production continued on a high level until late October, although spring dating orders were not accepted until later in the year.

A general feeling of optimism prevails in the industry as to business in the last six months of the year. As pointed out by one large manufacturer, midsummer does not present a true picture of the industry. Shipments to dealers were more than 5,000,000 tires less in the first six months of this year than they were in the same period of 1925, sales being retarded by high tire prices, accompanied by a "consumers' strike," unseasonable weather, and a general campaign to conserve rubber products. It is estimated that at the beginning of the year motorists carried 10,000,000 spare tires, and they now have less than 5,000,000. Akron authorities predict that shipments to dealers should exceed 20,000,000 tires in the last half of the year, against less than 15,000,000 shipped in the first six months.

Would Amend Revenue Act

COLUMBUS, Ohio, Aug. 2.—A plea that the Federal Reserve Act be amended to aid finance organizations was made at the annual convention of the National Association of Supervisors of State Banks by A. E. Duncan, chairman of the board of directors of the Commercial Credit Co.

Mr. Duncan, who heads an organization with capital and surplus exceeding \$30,000,000, resources of more than \$115,000,000 and whose gross business, that of purchasing instalment paper, exceeded

Coming Motor Events

Automobile Shows

1927 NATIONAL SHOWS

New York.....Jan. 8-15
Chicago.....Jan. 29-Feb. 5

Boston, Mass.....March 5-12
Mechanics Bldg.

Boston, Mass.....Sept. 27-Oct. 2
Radio Exposition, Mechanics' Bldg.

Chicago.....Nov. 8-13
Show and convention, Automotive Equipment Ass'n, Coliseum.

Chicago.....Nov. 15-19
Show and convention of the National Standard Parts Ass'n, Hotel Sherman.

Chicago.....Sept. 27-Oct. 2
National Radio Exposition.

Dallas, Tex.....Oct. 9-24
Automobile Bldg.

Denver, Colo.....Aug. 3-6
Automobile Show, Civic Center.

New York.....Sept. 13-18
Madison Square Garden, Radio World's Fair.

San Francisco.....Aug. 21-23
Pacific Radio Exposition, Exposition Auditorium.

St. Louis.....Sept. 4-19
Industrial Exposition, Forest Park.

Races

Altoona, Pennsylvania.....Sept. 6
Atlantic City, N. J.....Sept. 25
Charlotte, N. C.....Aug. 23
Dallas, Texas.....Nov. 11
Los Angeles, Cal.....Nov. 25
Philadelphia.....Sept. 4-11

National Air Races
Salem, New Hampshire.....Oct. 12

Conventions

Automotive Equipment Association, Coliseum, Chicago.....Nov. 8-13
National Standard Parts Association, Hotel Sherman, Chicago.....Nov. 15-19
National Tire Dealers Association, Inc., Memphis, Tenn.....Nov. 16-18
North Carolina Automotive Trade Association, Wrightsville Beach, N. C.....Aug. 9-10
Pennsylvania Automotive Association Elks' Home, Philadelphia.....Oct. 18-19
Society of Automotive Engineers, Transportation and Service Meeting, Boston, Mass.....Nov. 16-18

COMING FEATURE ISSUE OF CHILTON CLASS JOURNAL PUBLICATIONS

September 30—Automotive Industries—Annual Production Issue

\$262,000,000 last year, expressed the belief that the act should be so amended as to make eligible for rediscount loans to finance companies handling self-liquidating receivables of merchandise sales. He said that to amend the act would enable the companies to borrow money cheaper, reduce their rates and thereby lessen the burden upon commerce.

39 Aircraft Makers

WASHINGTON, Aug. 2.—The biennial census of aircraft manufacturers, engaged in the production of airplanes, seaplanes and accessories for same, just announced here show that in 1925 there were 39 manufacturers so engaged, manufacturing 621 airplanes, 78 seaplanes and \$3,429,000 of parts, the aggregate business totaling \$12,277,000 in that year.

Compared with 1923, the last preceding census, the figures show 33 manufacturers, producing 505 airplanes, 82 seaplanes and \$2,642,000 of parts, the total production amount to \$12,945,000, or 5.2 per cent less than the 1925 production.

F. G. Allen Advances

CLEVELAND, Aug. 2.—F. G. Allen, formerly northwestern district service manager for the White Company, with headquarters at Minneapolis, has been promoted to district service manager at Detroit. Mr. Allen has been succeeded at Minneapolis by B. E. Brown, formerly shop superintendent.

To Sell Star

NEW YORK, Aug. 2.—The following automobile merchants have recently taken over the sale of Star products.

Sunset Garage, Casa Grande, Ariz., A. B. Johnson, Chloride, Ariz., Verde Motor Company Clarkdale, Ariz., M. H. Force, Oat, Ariz., Fincher Hardware Company, Waldo, Ark., H. W. Curtis Motor Company, Los Angeles, Cal., Winchell's Garage, San Andreas, Cal., San Pedro Star Motor Company, San Pedro, Cal., Skaggs & Minto, Sausalito, Cal.

W. L. Tolten, Acme, Alta., M. Nagel, Heisler, Alta., H. O. Walker, Stavely, Alta., H. Zehren, Youngstown, Alta., C. Halder, Lundar, Manitoba, R. J. Early, Campbellville, Ont., J. Emile Masse, Laurier Station, Quebec, Wolfe & Manaster, Harris, Sask., Dean & Prasse, North Battleford, Sask.

Stribling & Snuggs Motor Company, Philadelphia, Prout Auto Sales, 2384 Hudson Blvd., Jersey City, Roesch & Klinck, Inc., 1296 Main Street, Buffalo, Reeder Motor Sales, Reeder, N. Dak., Central Garage, Baltic, O., Mossman Auto Sales, Middleport, O., Hampsten Motor Company, Hooker, Okla., Springville Garage & Storage, Springville, Utah, Brotherton & Moore, Pasco, Wash., Hadley Motor Company, Pomeroy, Wash., Colville's Garage, Reardon, Wash., F. & F. Garage, Roy, Wash., Davis Motor Company, Casper, Wyo.

Car Makers Buy Much Steel

CLEVELAND, Aug. 2.—Because steel is once more moving to the automobile plants in this section in increasing quantities, steel mill operations in the Youngstown district are exceeding all records for the summer season with the exception of World War years.

Distributors and dealers are meeting with no unusual slump in the sale of motor cars and the factories are expecting earlier demands for fall than usual.

Prices and Weights of Current Passenger Car Models

| SHIP | | | | SHIP | | | | SHIP | | | |
|-----------------------------|-------|----------------|---------|--|-------|-----------------------|---------|-----------------------------|-------|----------------|---------|
| WT. PASS. BODY STYLE. PRICE | | | | WT. PASS. BODY STYLE. PRICE | | | | WT. PASS. BODY STYLE. PRICE | | | |
| AUBURN "4-44" | | | | CHRYSLER (Continued) | | | | "4-55" | | | |
| ----- | 5-p | Touring | \$1,145 | 3080 | 5-p | Sedan | 1,545 | 2560 | 5-p | Touring | \$1,095 |
| ----- | 5-p | Roadster | 1,145 | 2935 | 5-p | Royal Coupe | 1,695 | ----- | 4-p | Roadster | 1,295 |
| ----- | 5-p | Coupe | 1,175 | 2995 | 5-p | Brougham | 1,745 | 2900 | 5-p | Coach | 1,195 |
| ----- | 5-p | Sedan | 1,195 | 3085 | 5-p | Royal Sedan | 1,795 | ----- | 3-p | Coupe | 1,295 |
| "6-66" | | | | 3090 | 5-p | Crown Sedan | 1,895 | 2779 | 5-p | Sedan | 1,395 |
| "8-88" | | | | "80" | | | | "6-65" | | | |
| (129 in. W. B.) | | | | 3775 | 5-p | (185½ in.)* Phaeton | 2,545 | ----- | 5-p | Touring | 1,295 |
| 3180 | 4-p | Sport-Roadster | 1,695 | 3730 | 2-4-p | Roadster | 2,595 | ----- | 4-p | Roadster | 1,495 |
| 3200 | 6-p | Touring | 1,695 | 4105 | 5-p | Sedan | 3,095 | 2779 | 5-p | Coach | 1,395 |
| ----- | 3-p | Coupe | 1,745 | (192½ in.)* | | | | ----- | 3-p | Coupe | 1,495 |
| 3380 | 5-p | Brougham | 1,795 | 4015 | 4-p | Coupe | 2,895 | 2900 | 5-p | Sedan | 1,595 |
| 3450 | 5-p | Sedan | 1,995 | (198½ in.)* | | | | "8-81" | | | |
| 3450 | ----- | Wanderer | 2,045 | 4225 | 7-p | Sedan | 3,195 | ----- | 4-p | Roadster | 2,315 |
| (146 in. W. B.) | | | | 4260 | 7-p | Sedan Lim. | 3,595 | ----- | 7-p | Touring | 2,265 |
| ----- | 7-p | Sedan | 2,495 | *Overall length. | | | | 3000 | 3-p | Coupe | 2,195 |
| BUICK Standard "6" | | | | CLEVELAND "31" | | | | ----- | 4-p | Coupe | 2,095 |
| 2845 | 2-4-p | Roadster | \$1,195 | 2415 | 5-p | Touring | \$945 | 4050 | 5-p | Sedan | 2,265 |
| 2955 | 5-p | Touring | 1,225 | 2565 | 5-p | Tour'g DeLuxe | 1,025 | ----- | 7-p | Sedan | 2,765 |
| 3020 | 2-4-p | Coupe | 1,195 | 2520 | 3-p | Coupe | 1,035 | ESSEX | | | |
| 3150 | 5-p | 2 d. Sedan | 1,195 | 2695 | 5-p | Sedan | 1,090 | 2290 | 5-p | Touring | ----- |
| 3110 | 4-p | Coupe | 1,275 | "43" | | | | 2455 | 5-p | Coach | \$795 |
| 3230 | 5-p | 4 d. Sedan | 1,295 | 2800 | 5-p | Touring | 1,145 | FLINT | | | |
| "Master" | | | | 2975 | 5-p | Sp. Touring | 1,295 | "Z-18" | | | |
| (120 in. W. B.) | | | | 2915 | 3-p | Coupe | 1,225 | 2497 | 5-p | Coach | 1,085 |
| ----- | 4-p | Coupe | 1,465 | 3145 | 5-p | Sedan | 1,345 | 2500 | 5-p | DeL. Coach | 1,185 |
| 3670 | 5-p | 2-d. Sedan | 1,395 | CUNNINGHAM | | | | "B-60" | | | |
| 3765 | 5-p | 4-d. Sedan | 1,495 | 4500 | 4-p | Sp. Touring | \$6,150 | 2683 | 4-p | Roadster | 1,395 |
| (128 in. W. B.) | | | | 4600 | 7-p | Touring | 6,650 | 2708 | 5-p | Touring | 1,285 |
| 3570 | 4-p | Sp. Roadster | \$1,495 | 4700 | 4-p | Coupe | 7,600 | ----- | 4-p | Coupe Roadster | 1,495 |
| 3635 | 5-p | Sp. Touring | 1,525 | 5000 | 6-p | Limousine | 8,100 | 3093 | 5-p | Sedan 4d. | 1,525 |
| 3805 | 3-p | Country Club | 1,765 | DAGMAR | | | | 2933 | 5-p | Brougham | 1,525 |
| ----- | 5-p | Coupe | 1,850 | 3750 | 4-p | Roadster | \$3,500 | "E-80" | | | |
| 3940 | 5-p | Brough. Sedan | 1,925 | 3800 | 4-p | Sp. Tourer | 3,500 | (120 in. W. B.) | | | |
| 4025 | 7-p | Sedan | 1,995 | 3700 | 4-p | Phaeton | 3,500 | 3139 | 4-p | Sport Road. | \$1,945 |
| CADILLAC | | | | 4200 | 4-p | Petite Coupe | 4,500 | 3189 | 5-p | Touring | 1,595 |
| "314" Standard Line | | | | 4200 | 4-p | Petite Sedan | 4,500 | 3310 | 4-p | Sp. Touring | 1,945 |
| (132 in. W. B.) | | | | 4500 | 4-p | De Luxe Coupe | 4,750 | 3414 | 4-p | Coupe | 2,045 |
| 4110 | 5-p | Brougham | \$2,995 | 4700 | 5-p | Sedan | 4,700 | 3529 | 5-p | Sedan | 2,195 |
| 4040 | 2-p | Coupe | 3,100 | 4800 | 7-p | Sedan | 4,750 | (130 in. W. B.) | | | |
| 4125 | 4-p | Victoria | 3,195 | "6-60" | | | | 3294 | 7-p | Touring | ----- |
| 4210 | 5-p | Sedan | 3,250 | 3150 | 5-p | Touring | 1,785 | 3649 | 7-p | Sedan | 2,395 |
| 4315 | 7-p | Sedan | 3,350 | 3100 | 2-p | Roadster | 1,985 | FORD | | | |
| ----- | 2-p | Sport Coupe | 3,500 | 3200 | 4-p | Sp. Touring | 1,985 | With Starter, Dem. Rims and | | | |
| 4380 | 7-p | Imperial | 3,535 | 3500 | 5-p | Sedan | 2,445 | Balloon Tires | | | |
| ----- | ----- | Sport Sedan | 3,650 | DAVIS | | | | 1655 | 2-p | Runabout | \$360 |
| Custom Built | | | | 2915 | 5-p | Legion. Tour. | 1,495 | 1738 | 5-p | Touring | 380 |
| (132 in.) | | | | 3000 | 5-p | Sedan | 1,595 | 1860 | 2-p | Coupe | 485 |
| 4065 | 2-p | Roadster | \$3,350 | 3060 | 5-p | Imperial Sedan | 1,795 | 1972 | 5-p | Tudor Sedan | 495 |
| (138 in. W. B.) | | | | "93-27" | | | | 2004 | 5-p | Fordor Sedan | 545 |
| 4125 | 7-p | Touring | \$3,450 | 2325 | 5-p | Touring | \$1,285 | FRANKLIN | | | |
| 4109 | 5-p | Phaeton | 3,450 | 2500 | 5-p | Sedan | 1,285 | "11" | | | |
| ----- | ----- | Sp. Phaeton | 3,975 | 2450 | 3-p | Coupe | 1,285 | 2800 | 3-p | Sport Road. | \$2,690 |
| 4300 | 5-p | Coupe | 3,450 | DIANA "St. 8" | | | | 2845 | 5-p | Touring | 2,635 |
| 4300 | 5-p | Sedan | 3,895 | 2995 | 5-p | Roadster | \$1,795 | 2965 | 3-p | Coupe | 2,645 |
| 4400 | 7-p | Suburban | 4,125 | 2995 | 5-p | Palm Beach | 1,995 | ----- | 3-5-p | Coupe | 2,760 |
| 4450 | 7-p | Imperial | 4,350 | 3170 | 5-p | DeL. Brougham | 1,995 | 3175 | 5-p | Sedan | 2,790 |
| CASE | | | | 3275 | 5-p | De Luxe Sedan | 2,195 | ----- | 4-p | Victoria | 2,790 |
| J. I. C. | | | | 3160 | 5-p | Cabriolet | 2,095 | ----- | 5-7-p | Sedan | 2,840 |
| 3260 | 3-p | Roadster | \$1,840 | 3640 | 7-p | Sedan (135 in. W. B.) | 2,695 | 3080 | 5-p | Oxford Sedan | 2,865 |
| 3290 | 5-p | Touring | 1,885 | 3640 | 7-p | Berline Sedan | 2,895 | 3275 | 7-p | Sport Sedan | 2,910 |
| 3470 | 5-p | Sp. Touring | 2,160 | DODGE BROTHERS | | | | 3135 | 7-p | Limousine | 2,990 |
| 3640 | 5-p | Sedan | 2,590 | 2448 | 2-p | Roadster | \$ 795 | ----- | ----- | Cabriolet | 4,400 |
| 3650 | 5-p | Brougham | 2,590 | 2538 | 2-p | Special Roadster | 845 | GARDNER | | | |
| "Y" | | | | 2567 | 5-p | Touring | 795 | 6B | | | |
| 3950 | 7-p | Touring | 2,225 | 2642 | 5-p | Spec. Touring | 845 | 3070 | 4-p | Phaeton | \$1,395 |
| 4320 | 7-p | Sedan | 2,975 | 2497 | 2-p | Sport Roadster | 880 | 3030 | 4-p | Roadster | 1,395 |
| CHANDLER "35" | | | | 2617 | 4-p | Sport Touring | 880 | 3290 | 5-p | Brougham | 1,545 |
| 3090 | 2-p | Roadster | \$1,695 | 2589 | 2-p | Coupe | 845 | 3210 | 4-p | Cabriolet | 1,695 |
| 3085 | 5-p | Sport Touring | 1,545 | 2632 | 2-p | Spec. Coupe | 895 | 3280 | 5-p | Imp. Sedan | 1,695 |
| 3223 | 7-p | Touring | 1,645 | 2811 | 5-p | Sedan | 895 | 8B | | | |
| 3498 | 5-p | 20th C'y Sedan | 1,590 | 2883 | 5-p | Spec. Sed. | 945 | 3350 | 4-p | Phaeton | 1,795 |
| 3309 | 6-p | Brougham | 1,695 | 2920 | 5-p | DeL. Sedan | 1,075 | 3350 | 4-p | Sp. Roadster | 1,795 |
| 3525 | 5-p | Met. Sedan | 1,895 | DUESENBERG | | | | 3620 | 5-p | Brougham | 1,895 |
| 3594 | 7-p | Sedan | 1,995 | Straight "8" | | | | 3480 | 4-p | Cabriolet | 2,095 |
| 3594 | 7-p | Berline | 2,095 | 3920 | 2-p | Roadster | † | 3620 | 5-p | Imp. Sedan | 2,095 |
| CHEVROLET "X" | | | | 3970 | 4-p | Roadster | † | 3940 | 7-p | Sedan | 2,795 |
| 1780 | 2-p | Roadster | \$510 | 3700 | 5-p | Phaeton | † | GRAY | | | |
| 1875 | 5-p | Touring | 510 | 3980 | 4-p | Sp. Phaeton | † | "8" | | | |
| 2030 | 2-p | Utility Coupe | 645 | 4115 | 5-p | Sedan | † | 1755 | 5-p | Touring | \$595 |
| 2130 | 5-p | Coach | 645 | 4500 | 7-p | Sedan | † | 2055 | 5-p | Sedan | \$845 |
| 2215 | 5-p | Sedan | 735 | †Manufacturers do not quote list prices. | | | | HERTZ | | | |
| 2215 | 5-p | Landau Sedan | 765 | DU PONT "D" | | | | "D-1" | | | |
| CHRYSLER | | | | 3300 | 2-p | Roadster | \$2,600 | ----- | 5-p | Touring | ----- |
| "60" | | | | 3550 | 5-p | Touring | 2,600 | 3800 | 5-p | Sedan | ----- |
| 2575 | 5-p | Touring | \$1,075 | 3550 | 5-p | Touring Sedan | 3,400 | HUDSON | | | |
| 2545 | 2-p | Roadster | 1,145 | DURANT | | | | "Super Six" | | | |
| ----- | 2-p | Coupe | 1,165 | 2300 | 5-p | Touring | \$ 730 | 3365 | 7-p | Phaeton | ----- |
| 2780 | 5-p | Coach | 1,195 | 2380 | 5-p | Spec. Touring | 805 | 3405 | 5-p | Coach | 1,095 |
| 2840 | 5-p | Sedan | 1,295 | 2450 | 4-p | Coupe | 825 | 3495 | 4-p | Brougham 4d. | 1,395 |
| "70" | | | | 2480 | 4-p | Spec. Coupe | 875 | 3645 | 7-p | Sedan | 1,550 |
| 2805 | 4-p | Roadster | \$1,525 | 2650 | 5-p | Sedan | 880 | HUPMOBILE | | | |
| 2785 | 5-p | Phaeton | 1,395 | 2710 | 5-p | Spec. Sedan | 995 | "A" | | | |
| 2895 | 5-p | Coach | 1,395 | A-22 | | | | 2620 | 5-p | Touring | \$1,325 |
| "80" | | | | 2300 | 5-p | Touring | \$ 730 | 2800 | 5-p | Sedan | 1,385 |
| "88" | | | | 2380 | 5-p | Spec. Touring | 805 | 2800 | 2-4-p | Coupe | 1,385 |
| (129 in. W. B.) | | | | 2450 | 4-p | Coupe | 825 | "E" | | | |
| 3180 | 4-p | Sport-Roadster | 1,695 | 2480 | 4-p | Spec. Coupe | 875 | 3300 | 5-p | Touring | 1,945 |
| 3200 | 6-p | Touring | 1,695 | 2650 | 5-p | Sedan | 880 | 3360 | 7-p | Touring | 2,045 |
| ----- | 3-p | Coupe | 1,745 | "92-27" | | | | "E" | | | |
| 3380 | 5-p | Brougham | 1,795 | 2915 | 3-p | Coupe | 1,225 | "E" | | | |
| 3450 | 5-p | Sedan | 1,995 | 3145 | 5-p | Sedan | 1,345 | "E" | | | |
| 3450 | ----- | Wanderer | 2,045 | "93-27" | | | | "E" | | | |
| (146 in. W. B.) | | | | 2325 | 5-p | Touring | \$1,285 | "E" | | | |
| ----- | 7-p | Sedan | 2,495 | 2500 | 5-p | Sedan | 1,285 | "E" | | | |
| BUICK Standard "6" | | | | 2450 | 3-p | Coupe | 1,285 | "E" | | | |
| 2845 | 2-4-p | Roadster | \$1,195 | DIANA "St. 8" | | | | "E" | | | |
| 2955 | 5-p | Touring | 1,225 | 2995 | 5-p | Roadster | \$1,795 | "E" | | | |
| 3020 | 2-4-p | Coupe | 1,195 | 2995 | 5-p | Palm Beach | 1,995 | "E" | | | |
| 3150 | 5-p | 2 d. Sedan | 1,195 | 3170 | 5-p | DeL. Brougham | 1,995 | "E" | | | |
| 3110 | 4-p | Coupe | 1,275 | 3275 | 5-p | De Luxe Sedan | 2,195 | "E" | | | |
| 3230 | 5-p | 4 d. Sedan | 1,295 | 3160 | 5-p | Cabriolet | 2,095 | "E" | | | |
| "Master" | | | | 3640 | 7-p | Sedan (135 in. W. B.) | 2,695 | "E" | | | |
| (120 in. W. B.) | | | | 3640 | 7-p | Berline Sedan | 2,895 | "E" | | | |
| ----- | 4-p | Coupe | 1,465 | DODGE BROTHERS | | | | "E" | | | |
| 3670 | 5-p | 2-d. Sedan | 1,395 | 2448 | 2-p | Roadster | \$ 795 | "E" | | | |
| 3765 | 5-p | 4-d. Sedan | 1,495 | 2538 | 2-p | Special Roadster | 845 | "E" | | | |
| (128 in. W. B.) | | | | 2567 | 5-p | Touring | 795 | "E" | | | |
| 3570 | 4-p | Sp. Roadster | \$1,495 | 2642 | 5-p | Spec. Touring | 845 | "E" | | | |
| 3635 | 5-p | Sp. Touring | 1,525 | 2497 | 2-p | Sport Roadster | 880 | "E" | | | |
| 3805 | 3-p | Country Club | 1,765 | 2617 | 4-p | Sport Touring | 880 | "E" | | | |
| ----- | 5-p | Coupe | 1,850 | 2589 | 2-p | Coupe | 845 | "E" | | | |
| 3940 | 5-p | Brough. Sedan | 1,925 | 2632 | 2-p | Spec. Coupe | 895 | "E" | | | |
| 4025 | 7-p | Sedan | 1,995 | 2811 | 5-p | Sedan | 895 | "E" | | | |
| CADILLAC | | | | 2883 | 5-p | Spec. Sed. | 945 | "E" | | | |
| "314" Standard Line | | | | 2920 | 5-p | DeL. Sedan | 1,075 | "E" | | | |
| (132 in. W. B.) | | | | DUESENBERG | | | | "E" | | | |
| 4110 | 5-p | Brougham | \$2,995 | Straight "8" | | | | "E" | | | |
| 4040 | 2-p | Coupe | 3,100 | 3920 | 2-p | Roadster | † | "E" | | | |
| 4125 | 4-p | Victoria | 3,195 | 3970 | 4-p | Roadster | † | "E" | | | |
| 4210 | 5-p | Sedan | 3,250 | 3700 | 5-p | Phaeton | † | "E" | | | |
| 4315 | 7-p | Sedan | 3,350 | 3980 | 4-p | Sp. Phaeton | † | "E" | | | |
| ----- | 2-p | Sport Coupe | 3,500 | 4115 | 5-p | Sedan | † | "E" | | | |
| 4380 | 7-p | Imperial | 3,535 | 4500 | 7-p | Sedan | † | "E" | | | |
| ----- | ----- | Sport Sedan | 3,650 | †Manufacturers do not quote list prices. | | | | "E" | | | |
| Custom Built | | | | DU PONT "D" | | | | "E" | | | |
| (132 in.) | | | | 3300 | 2-p | Roadster | \$2,600 | "E" | | | |
| 4065 | 2-p | Roadster | \$3,350 | 3550 | 5-p | Touring | 2,600 | "E" | | | |
| (138 in. W. B.) | | | | 3550 | 5-p | Touring Sedan | 3,400 | "E" | | | |
| 4125 | 7-p | Touring | \$3,450 | DURANT | | | | "E" | | | |
| 4109 | 5-p | Phaeton | 3,450 | 2300 | 5-p | Touring | \$ 730 | "E" | | | |
| ----- | ----- | Sp. Phaeton | 3,975 | 2380 | 5-p | Spec. Touring | 805 | "E" | | | |
| 4300 | 5-p | Coupe | 3,450 | 2450 | 4-p | Coupe | 825 | "E" | | | |
| 4300 | 5-p | Sedan | 3,89, | | | | | | | | |

Prices and Weights of Current Passenger Car Models

SHIP WT. PASS. BODY STYLE. PRICE

| McFARLAN "6" | | | |
|--------------|-----|----------------|---------|
| 3700 | 2-p | Roadster | \$2,650 |
| 3700 | 2-p | Spec. Roadster | 2,900 |
| 3600 | 5-p | Touring | 2,650 |
| 3600 | 7-p | Touring | 2,750 |
| 3850 | 5-p | Brougham 4d. | \$3,180 |
| 3850 | 4-p | Coupe | 3,180 |
| 3850 | 5-p | Sedan | 3,180 |
| 3850 | 5-p | Spec. Sedan | 3,180 |
| 3850 | 7-p | Sedan | 3,280 |
| 3850 | 5-p | Sub. Sedan | 3,380 |
| 3850 | 7-p | Sub. Sedan | 3,480 |

| "TV" | | | |
|------|-----|-------------|---------|
| 4000 | 2-p | Roadster | \$5,400 |
| 4800 | 4-p | Sp. Touring | 5,600 |
| 4800 | 4-p | Coupe | 6,720 |
| 5200 | 4-p | Tour. Sedan | 6,720 |
| 5200 | 7-p | Tour. Sedan | 6,810 |
| 5200 | 6-p | Sedan | 6,720 |
| 5200 | 7-p | Sedan | 6,810 |
| 5200 | 7-p | Spec. Sedan | 6,810 |
| 5200 | 7-p | Enc. Sedan | 7,110 |
| 5200 | 7-p | Sub. Sedan | 7,110 |
| 5200 | 7-p | Town Car | 9,000 |

| "Straight 8" | | | |
|--------------|-----|--------------|---------|
| 4000 | 2-p | Roadster | \$2,650 |
| 4000 | 4-p | Roadster | 2,900 |
| 4000 | 5-p | Touring | 2,650 |
| 4000 | 7-p | Touring | 2,750 |
| 4000 | 5-p | Sedan | 3,180 |
| 4000 | 5-p | Sub. Sedan | 3,380 |
| 4000 | 7-p | Sedan | 3,280 |
| 4000 | 7-p | Sub. Sedan | 3,480 |
| 4000 | 4-p | Coupe | 3,180 |
| 4000 | 5-p | Coach Broug. | 3,180 |
| 4000 | 5-p | Town Car | 4,600 |

| MARMON "74" | | | |
|-------------|-----|---------------|---------|
| 3913 | 4-p | Speedster | \$3,295 |
| 3827 | 2-p | Speedster | 3,295 |
| 3804 | 5-p | Phaeton | 3,295 |
| 3704 | 7-p | Touring | 3,295 |
| 4080 | 5-p | Std. Brougham | 3,295 |
| 3983 | 2-p | Std. Coupe | 3,295 |
| 3937 | 4-p | Victoria | 3,295 |
| 4065 | 5-p | Sedan | 3,295 |
| 4243 | 7-p | Sedan | 3,370 |
| 4080 | 5-p | Spec. Broug. | 3,395 |
| 4065 | 5-p | Spec. Sedan | 3,395 |
| 4243 | 7-p | Spec. Sedan | 3,470 |
| 4031 | 5-p | Sedan De Luxe | 3,775 |
| 4175 | 7-p | Sedan De Luxe | 3,850 |
| 4100 | 5-p | Sedan Lim. | 3,900 |
| 4215 | 7-p | Sedan Lim. | 3,975 |

| MOON "6-60" | | | |
|-------------|------|----------------|---------|
| 3500 | 3-5p | Roadster | \$995 |
| 3500 | 5-p | Phaeton | 995 |
| 3500 | 5-p | Coach | 995 |
| Series "A" | | | |
| 2600 | 5-p | Roadster | \$1,395 |
| 2500 | 5-p | Roadster | 1,395 |
| 2720 | 5-p | Cab. Roadster | 1,595 |
| 2710 | 5-p | DeL. Brougham | 1,395 |
| 2860 | 5-p | DeL. Sedan 4d. | 1,545 |
| London | | | |
| 3270 | 5-p | Sp. Touring | \$1,985 |
| 3290 | 7-p | Touring | 1,985 |
| 3590 | 5-p | Petite Sedan | 2,540 |

| NASH "Light Six" | | | |
|------------------|-----|----------------|---------|
| 2210 | 5-p | Touring | \$865 |
| 2410 | 5-p | Sedan | 995 |
| "Special" | | | |
| 2870 | 2-p | Roadster | \$1,115 |
| 2960 | 5-p | Touring | 1,135 |
| 2980 | 4-p | Roadster | 1,225 |
| 3030 | 2-p | Business Coupe | 1,165 |
| 3120 | 5-p | Sedan 2d. | 1,215 |
| 3170 | 5-p | Sedan | 1,315 |
| 3270 | 5-p | Sedan 4d. | 1,445 |

| "Advanced" | | | |
|-----------------|-----|-----------|---------|
| (121 in. W. B.) | | | |
| 3390 | 4-p | Roadster | \$1,475 |
| 3400 | 5-p | Touring | 1,340 |
| 3550 | 5-p | Sedan 2d. | 1,425 |
| 3550 | 5-p | Sedan | 1,525 |
| "Advanced" | | | |
| (127 in. W. B.) | | | |
| 3480 | 7-p | Touring | \$1,490 |
| 3640 | 4-p | Victoria | 1,790 |
| 3750 | 5-p | Coupe 4d. | 1,990 |
| 3830 | 7-p | Sedan | 2,090 |

| OAKLAND "E" | | | |
|-------------|-----|--------------|-------|
| 2600 | 4-p | Sp. Roadster | 1,175 |
| 2500 | 5-p | Phaeton | 1,025 |
| 2640 | 5-p | 2d. Sedan | 1,095 |
| 2615 | 3-p | Landau Coupe | 1,125 |
| 2765 | 5-p | 4d. Sedan | 1,195 |
| 2885 | 5-p | Landau Sedan | 1,295 |

| OLDSMOBILE "30E" | | | |
|------------------|-----|---------------|-------|
| 2220 | 5-p | Touring | \$875 |
| 2340 | 4-p | DeL. Roadster | 975 |
| 2405 | 5-p | DeL. Touring | 980 |
| 2350 | 2-p | Coupe | 925 |

| SHIP WT. PASS. BODY STYLE. PRICE | | | |
|-------------------------------------|-----|---------------|-------|
| 2450 | 5-p | Coach | 950 |
| 2470 | 2-p | De Luxe Coupe | 990 |
| 2620 | 5-p | De Luxe Coach | 1,050 |
| 2620 | 5-p | Sedan | 1,025 |
| 2690 | 5-p | De Luxe Sedan | 1,125 |
| 2700 | 5-p | Landau | 1,190 |

| OVERLAND "96" 4 | | | |
|-----------------|-----|---------------|-------|
| 2075 | 5-p | Touring | \$645 |
| 2075 | 2-p | Coupe | 735 |
| 2075 | 5-p | Sedan | 735 |
| "91" 4 | | | |
| 1919 | 5-p | Touring | \$495 |
| 2202 | 5-p | Std. Sedan 2d | 595 |
| "93" 6 | | | |
| 2395 | 5-p | Touring | \$895 |
| 2397 | 2-p | Coupe | 895 |
| 2443 | 2-p | Std. Sedan | 935 |

| PACKARD "6" | | | |
|-----------------|-----|------------|---------|
| (126 in. W. B.) | | | |
| 3643 | 4-p | Roadster | \$2,785 |
| 3653 | 5-p | Phaeton | 2,585 |
| 3753 | 4-p | Coupe | 2,585 |
| 3937 | 5-p | Sedan | 2,585 |
| (133 in. W. B.) | | | |
| 3793 | 7-p | Touring | \$2,785 |
| 4043 | 7-p | Sedan | 2,785 |
| 4133 | 7-p | Club Sedan | 2,725 |
| 4133 | 7-p | Sedan Lim. | 2,885 |

| "8" | | | |
|-----------------|-----|------------|---------|
| (135 in. W. B.) | | | |
| 4060 | 4-p | Runabout | \$3,950 |
| 4090 | 5-p | Phaeton | 3,750 |
| 4242 | 4-p | Coupe | 4,650 |
| 4528 | 5-p | Sedan | 4,750 |
| (143 in. W. B.) | | | |
| 4199 | 7-p | Touring | \$3,950 |
| 4655 | 5-p | Club Sedan | 4,890 |
| 4655 | 7-p | Sedan | 5,000 |
| 4710 | 7-p | Sedan Lim. | 5,100 |

| PAIGE "6-72" | | | |
|-----------------|-----|---------------|---------|
| (125 in. W. B.) | | | |
| 3500 | 5-p | Std. Sedan | \$1,495 |
| 3615 | 5-p | Sedan De Luxe | 1,670 |
| 3475 | 4-p | Cab Roadster | 2,295 |
| 3740 | 7-p | Sedan De Luxe | 1,995 |
| 3825 | 7-p | Limousine | 2,245 |
| (115 in. W. B.) | | | |
| 3055 | 5-p | Brougham | \$1,295 |

| PEERLESS "6-72" | | | |
|--------------------|------|----------------|---------|
| ((126½ in. W. B.)) | | | |
| 3175 | 5-p | Touring | \$1,895 |
| 3425 | 5-p | Coupe | 2,295 |
| 3500 | 5-p | Sedan | 2,395 |
| (133½ in. W. B.) | | | |
| 3275 | 2-p | Sp. Roadster | \$2,195 |
| 3300 | 7-p | Sp. Touring | 1,995 |
| 3700 | 7-p | Sedan | 2,595 |
| 3825 | 7-p | Limousine | 2,695 |
| 3575 | 5-p | De Luxe Sedan | 2,795 |
| 3650 | 7-p | De Luxe Sedan | 2,995 |
| "6-80" | | | |
| 2800 | 5-p | Phaeton | \$1,395 |
| 2895 | 5-p | Roadster | 1,495 |
| 2950 | 2-4p | Coupe Roadster | 1,565 |
| 3140 | 5-p | Sedan | 1,495 |
| 3140 | 5-p | Std. Sedan | 1,595 |
| 3140 | 5-p | Sport Sedan | 1,795 |
| 3140 | 5-p | De Luxe Sedan | 1,795 |

| PIERCE-ARROW "80" | | | |
|-------------------|-----|---------------|---------|
| 3245 | 2-p | Runabout | \$2,895 |
| 3300 | 4-p | Phaeton | 3,095 |
| 3425 | 7-p | Phaeton | 2,895 |
| 3470 | 5-p | Coach 2d. | 2,995 |
| 3525 | 5-p | Coach 4d. | 3,250 |
| 3620 | 7-p | Coach | 3,350 |
| 3375 | 4-p | Coupe | 3,695 |
| 3480 | 5-p | Sedan | 3,895 |
| 3600 | 7-p | Sedan | 3,995 |
| 3655 | 7-p | Enc. Dr. Lim. | 4,045 |
| 3675 | 7-p | Lim. Coach | 3,450 |

| "33" | | | |
|------|-----|---------------|---------|
| 4350 | 2-p | Runabout | \$5,250 |
| 4500 | 4-p | Touring | 5,250 |
| 4590 | 7-p | Touring | 6,250 |
| 4730 | 3-p | Coupe | 6,800 |
| 4800 | 4-p | Sedan | 6,900 |
| 4960 | 7-p | Sedan | 7,000 |
| 4750 | 4-p | Coupe Sedan | 6,900 |
| 4730 | 6-p | Brougham | 6,800 |
| 4850 | 7-p | Limousine | 7,000 |
| 5060 | 7-p | Enclosed Lim. | 7,000 |
| 4780 | 7-p | French Lim. | 7,000 |
| 4730 | 6-p | Landaulet | 7,000 |

| PONTIAC | | | |
|---------|-----|----------|-------|
| 2395 | 2-p | Coupe | \$825 |
| 2450 | 5-p | 2d Sedan | 825 |

SHIP WT. PASS. BODY STYLE. PRICE

| REO "T-6" | | | |
|-----------|-----|-------------|---------|
| 3375 | 2-p | Roadster | \$1,665 |
| 3182 | 5-p | Sp. Touring | 1,395 |
| 3365 | 2-0 | Coupe | 1,495 |
| 3365 | 2-p | Spec. Coupe | 1,565 |
| 3515 | 5-p | Sedan 4d. | 1,565 |
| 3565 | 5-p | Spec. Sedan | 1,745 |

| REVERE "25" | | | |
|-------------|-----|--------------|---------|
| 3900 | 2-p | Sp. Roadster | \$2,750 |
| 3975 | 4-p | Speedster | 2,750 |
| 4050 | 5-p | Touring | 2,750 |
| 4300 | 5-p | Sedan | 3,800 |
| "M" | | | |
| 3700 | 2-p | Roadster | \$3,200 |
| 3800 | 4-p | Sportster | 3,200 |
| 3970 | 5-p | Touring | 3,200 |
| 4400 | 5-p | Sedan | 4,000 |

| RICKENBACKER "E" | | | |
|------------------|-----|----------------|---------|
| 3038 | 5-p | Touring | \$1,750 |
| 3068 | 7-p | Touring | 1,795 |
| 2953 | 4-p | Roadster | 1,795 |
| 3116 | 5-p | Coupe-Sedan | 1,495 |
| 3202 | 5-p | Brougham | 1,695 |
| 3092 | 4-p | Coupe Roadster | 1,920 |
| 3317 | 5-p | Sedan | 1,995 |
| 3353 | 7-p | Sedan | 2,195 |

| "B-8" | | | |
|-------|-----|----------------|---------|
| 3227 | 4-p | Roadster | \$2,195 |
| 3315 | 5-p | Touring | 2,150 |
| 3355 | 7-p | Touring | 2,195 |
| 3445 | 5-p | Coupe Sedan | 2,095 |
| 3485 | 5-p | Brougham | 2,195 |
| 3345 | 4-p | Coupe Roadster | 2,320 |
| 3603 | 5-p | Sedan | 2,495 |
| 3640 | 7-p | Sedan | 2,595 |
| 3640 | 4-p | Sup. Sp. Sedan | 5,000 |

| ROAMER "6-50-55" | | | |
|------------------|------------------|---------|--|
| 5-p | Spec. Tourer | \$1,295 | |
| 5-p | Spec. Sp. Tourer | 1,395 | |
| 2-p | Bus. Coupe | 1,395 | |
| 5-p | Coupe | 1,395 | |
| 5-p | Sedan DeLuxe | 1,695 | |

| "6-54-E" | | | |
|----------|-----------|---------|--|
| 4-p | Roadster | \$2,385 | |
| 4-p | Tourer | 1,985 | |
| 4-p | Sport | 2,285 | |
| 7-p | Tourer | 2,285 | |
| 3-p | Cabriolet | 2,750 | |
| 5-p | Sedan | 2,950 | |

| "4-75-E" | | | |
|----------------|-----------|---------|--|
| "Custom Built" | | | |
| 3-p | Speedster | \$3,485 | |
| 3-p | Sport | 3,285 | |
| 4-p | Tourer | 2,985 | |

| "8-88" (138 in. W. B.) | | | |
|------------------------|-----------------------|----------|---------|
| 4-p | Roadster | \$2,750 | |
| 5-p | Sport | 2,750 | |
| 5-p | Tourer | 2,495 | |
| 7-p | Tourer | 2,585 | |
| 2-p | Speedster | 2,885 | |
| 5-p | Sedan | 1,995 | |
| 3-p | Cabriolet | 2,950 | |
| 5-p | Spec. Sedan | 3,485 | |
| 7-p | Sedan (136 in. W. B.) | 3,285 | |
| 5-p | Brougham | 2,895 | |
| "8-88" (126 in. W. B.) | | | |
| 2950 | 2-p | Roadster | \$1,895 |
| 3150 | 2-p | Coupe | 1,985 |
| 3580 | 5-p | Sedan | 1,985 |

ROLLS-ROYCE
Manufacturers do not quote list prices.

| STANLEY "262" | | | |
|---------------|-----|---------|---------|
| 3600 | 5-p | Phaeton | \$2,650 |
| 4000 | 5-p | Sedan | 3,400 |

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Mechanical Specifications of Current Passenger Car Models

This list comprises cars distributed on a national basis

| MAKE AND MODEL | | Wheel Base (Inches) | Tire Size | Model and Number of Cyls. | Rated H.P. | Patent Dis. Placement | Valve Arrange-ment | Camshaft Drive | Piston Material | No. Main Bear. | Crankshaft Vib'n | Oiling System | Cooling System | Thermostat? | Radiator? | Carburetor | Air Cleaner? | ELECTRICAL SYSTEM | | | | Clutch—Type and Make | Gear Set—Make | Universals—Type and Make | REAR AXLE | | BRAKES | | Steering Gear—Type and Make | Rear Springs—Type and Length | Chassis Lubrication—Type and Make | ABBREVIATIONS—NAMES OF MFRS. OF STOCK PARTS |
|----------------|----------|---------------------|-----------|---------------------------|------------|-----------------------|--------------------|----------------|-----------------|----------------|------------------|---------------|----------------|-------------|-----------|------------|--------------|-------------------|-----------------|--------------|---------|----------------------|---------------|--------------------------|------------|------------------------|--------------|-----------|-----------------------------|------------------------------|-----------------------------------|---|
| | | | | | | | | | | | | | | | | | | | Ignition System | Starter Make | | | Make | Type and Make | Gear Ratio | Foot—Type and Location | 4-Wheel Type | —Optional | | | | |
| Auburn. | 4-44 | 120 | 30x5.25 | Lyc. . . CF 4-35x4 1/2 | 21.0 | 206 | He. C.I. | Al. | 5 | N | N | P.C. | Th. | N | N | Zen... | N | N | Remy | Remy | P.B&B. | W.G. | m-U.P. | 1 1/2 Sal. | 5.10 | E-F | E-T | H | Ross | S-50 3/4 | Oe-Ju. | A-K—Atwater-Kent |
| Auburn. | 6-66 | 121 | 30x5.25 | Lyc. . . 4HM 6-34x4 1/2 | 25.3 | 224 | Ch. C.I. | Ch. C.I. | 9 | N | N | P.C. | Pu. | N | N | Sch... | N | N | Remy | Remy | P.Long. | W.G. | m-U.P. | 1 1/2 Col. | 5.10 | B-F | E-T | M | Ross | S-57 | Pr-Dot | A-L—Auto-Lite |
| Auburn. | 8-88 | 129 | 30x5.77 | Lyc. . . 4HM 8-34x4 1/2 | 33.8 | 299 | Ch. C.I. | Ch. C.I. | 9 | N | N | P.C. | Pu. | N | N | Sch... | N | N | Remy | Remy | P.Long. | W.G. | m-U.P. | 1 1/2 Col. | 5.10 | B-F | E-T | M | Ross | S-57 | Pr-Dot | A-L—Auto-Lite |
| Buick | Standard | 146 | 32x6.20 | Own. . . Std. 6-33x4 1/2 | 23.4 | 207 | He. C.I. | He. C.I. | 4 | Y | Y | P.C. | Pu. | Y | Y | Mar... | Y | Y | Delco | Delco | D.Own. | Own. | m-Own. | 3/4 Ovn. | 4.90 | E-F | E-T | M | Jac. | V-48 | Pr-Ze. | Al—Alumite |
| Buick | Master | 120-128 | 33x6.00 | Own. . . Mast. 6-33x4 1/2 | 29.4 | 274 | He. C.I. | He. C.I. | 4 | Y | Y | P.C. | Pu. | Y | Y | Mar... | Y | Y | Delco | Delco | D.Own. | Own. | m-Own. | 3/4 Ovn. | 4.70 | E-F | E-T | M | Jac. | V-47 1/2 | Pr-Ze. | Al—Alumite |
| Cadillac | 314 | 132-138 | 33x6.75 | Own. . . 314 8-33x5 1/2 | 31.2 | 314 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.C. | Pu. | Y | Y | Ovn... | N | N | Delco | Delco | D.Own. | Ovn. | m-Spl... | 1 1/2 Ovn. | Var. | B-F | E-T | M | Jac. | S-60 | Pr-Al. | B&B—Borg & Beck |
| Case | Case | 132 | 34x7.30 | Own. . . 314 8-33x5 1/2 | 31.2 | 314 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.C. | Pu. | Y | Y | Ovn... | N | N | Delco | Delco | D.Own. | Ovn. | m-Spl... | 1 1/2 Ovn. | Var. | B-F | E-T | M | Jac. | S-60 | Pr-Al. | B&B—Borg & Beck |
| Case | JIC | 122 | 32x6.20 | Own. . . 816 6-33x4 1/2 | 27.3 | 242 | He. C.I. | He. C.I. | 4 | N | N | P.C. | Pu. | Y | Y | Sch... | N | N | Delco | Delco | D.Own. | Ovn. | f-Sne... | 1 1/2 Col. | 4.45 | E-F | E-T | M | Ross | S-57 | Pr-Al. | B&B—Ball & Ball |
| Case | 35 | 124 | 33x6.00 | Own. . . 816 6-33x4 1/2 | 27.3 | 242 | He. C.I. | He. C.I. | 4 | N | N | P.C. | Pu. | Y | Y | Sch... | N | N | Delco | Delco | D.Own. | Ovn. | f-Sne... | 1 1/2 Col. | 4.45 | E-F | E-T | M | Ross | S-57 | Pr-Al. | B&B—Ball & Ball |
| Chandler | X | 103 | 30x3 1/2 | Own. . . Sup. 4-31x4 | 21.8 | 171 | He. C.I. | He. C.I. | 3 | N | N | P.S. | Pu. | Y | Y | Car... | N | N | Remy | Remy | P.Own. | Ovn. | m-Own. | 1 1/2 Ovn. | 3.82 | E-R | E-T | N | Ovn. | S-54 | Pr-Al. | Car—Carrier |
| Chevrolet | 190 | 185-198 1/2 | 32x6.20 | Own. . . 190 6-33x5 1/2 | 29.4 | 288 | Ch. Spe. | Ch. Spe. | 7 | Y | Y | P.F. | Pu. | Y | Y | Str... | Y | Y | Remy | Remy | P.Own. | Ovn. | m-U.P. | 1 1/2 Ovn. | 4.27 | E-F | E-T | H | Ross | S-58 | Pr-Ze. | Cle—Cleveland |
| Chrysler | 60 | 156 1/2 | 30x5.25 | Own. . . 60 6-34x4 1/2 | 21.6 | 180 | Ch. C.I. | Ch. C.I. | 7 | Y | Y | P.C. | Pu. | Y | Y | Str... | Y | Y | Remy | Remy | P.Own. | Ovn. | m-U.P. | 1 1/2 Ovn. | 4.9 | E-F | E-T | H | Ross | S-58 | Pr-Ze. | Cl—Climax |
| Chrysler | 70 | 162 1/2 | 30x5.77 | Own. . . G 6-33x4 3/4 | 23.4 | 218 | Ch. C.I. | Ch. C.I. | 7 | Y | Y | P.C. | Pu. | Y | Y | Str... | Y | Y | Remy | Remy | P.Own. | Ovn. | m-U.P. | 1 1/2 Ovn. | 4.30 | E-F | E-T | H | Ross | S-51 1/2 | Pr-Ze. | Cl—Columbia |
| Cleveland | 31 | 108 1/2 | 31x5.25 | Own. . . 31 6-33x4 3/4 | 21.6 | 180 | Ch. C.I. | Ch. C.I. | 7 | Y | Y | P.C. | Pu. | Y | Y | Str... | Y | Y | Remy | Remy | P.Own. | Ovn. | m-U.P. | 1 1/2 Ovn. | 4.90 | E-F | E-T | M | Ross | S-51 | Boven | Cpl—Cumbold |
| Cleveland | 43 | 115 | 31x5.25 | Own. . . 43 6-33x4 3/4 | 23.4 | 219 | Ch. C.I. | Ch. C.I. | 3 | Y | Y | P.F. | Pu. | Y | Y | Str... | Y | Y | Remy | Remy | P.Own. | Ovn. | m-U.P. | 1 1/2 Ovn. | 4.90 | E-F | E-T | M | Ross | S-51 | Boven | Cpl—Cumbold |
| Cunningham | V-6 | 132-142 | 33x6.75 | Own. . . V-8 8-33x4 3/4 | 45.0 | 442 | Ch. C.I. | Ch. C.I. | 4 | N | N | P.F. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | f-Sne... | 1 1/2 Tim. | 4.23 | E-F | E-T | M | Ross | J-62 | Pr-Al. | De—Dawson |
| Dagmar | 6-60 | 122 | 32x6.20 | Con. . . 48 6-33x4 1/2 | 33.8 | 331 | Ch. C.I. | Ch. C.I. | 4 | N | N | P.F. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | f-Sne... | 1 1/2 Tim. | 4.23 | E-F | E-T | M | Ross | J-62 | Pr-Al. | De—Dawson |
| Dagmar | 6-70 | 138 | 33x5 1/2 | Con. . . 61 6-33x4 1/2 | 33.8 | 331 | Ch. C.I. | Ch. C.I. | 4 | N | N | P.F. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | f-Sne... | 1 1/2 Tim. | 4.23 | E-F | E-T | M | Ross | J-62 | Pr-Al. | De—Dawson |
| Davis | 92-27 | 115 | 30x5.77 | Con. . . 11U 6-33x4 3/4 | 25.3 | 230 | Ch. C.I. | Ch. C.I. | 7 | Y | Y | P.C. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Pet. | 1 1/2 Col. | 4.90 | E-F | E-T | M | Ross | S-52 | Pr-Al. | Dur—Durstons |
| Dodge Brothers | St. 8 | 109 1/2 | 32x6.00 | Con. . . 20L 6-29x4 3/4 | 18.1 | 169 | Ch. C.I. | Ch. C.I. | 4 | Y | Y | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Duesenberg | St. 8 | 116 | 31x5.25 | Own. . . 8-37x4 1/2 | 26.4 | 212 | Ch. C.I. | Ch. C.I. | 4 | Y | Y | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Delco | D.Own. | Ovn. | m-Mec. | 1 1/2 Col. | 5.3 | E-F | E-T | H | Ross | S-51 1/2 | Oe-Gl. | Dyn—Dyneto |
| Durant | A-22 | 124 | 32x6.20 | Own. . . A 8-27x4 1/2 | 26.4 | 210 | Ch. C.I. | Ch. C.I. | 3 | N | N | P.K. | Pu. | Y | Y | Str... | Y | Y | Delco | Del | | | | | | | | | | | | |

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Another Chevrolet Achievement

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1-Ton Truck \$495
reduced to

½-Ton Truck \$375
reduced to

(Chassis only) f.o.b. Flint, Michigan



Engineered to meet the most severe requirements of commercial haulage, Chevrolet trucks have won worldwide acceptance on the basis of low first cost, low operating cost and slow depreciation.

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CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation

World's Lowest Priced Gear-shift Trucks

Continued on page 483
P—Pump
Q—Quarter elliptic
R—Rectifier
S—Sleeve valve
T—Tie rod
U—Universal joint
V—Valve
W—Washer
X—X-frame
Y—Yoke

OG—Oil cups
OW—Oil cups with wick feed
P—Single plate
F—Pressure gun

I—In head
Int—Integral
I-F—Internal four wheels
I-R—Internal rear wheels
I-T—Three-quarter elliptic
K—Cone

E—Full elliptic
E-F—External four wheels
E-R—External rear wheels
E-T—External transmission
F—Filter

22—Semi-floating
23—Three-quarter floating
A—Air
Al—Aluminum
B—Both internal and external, four wheels

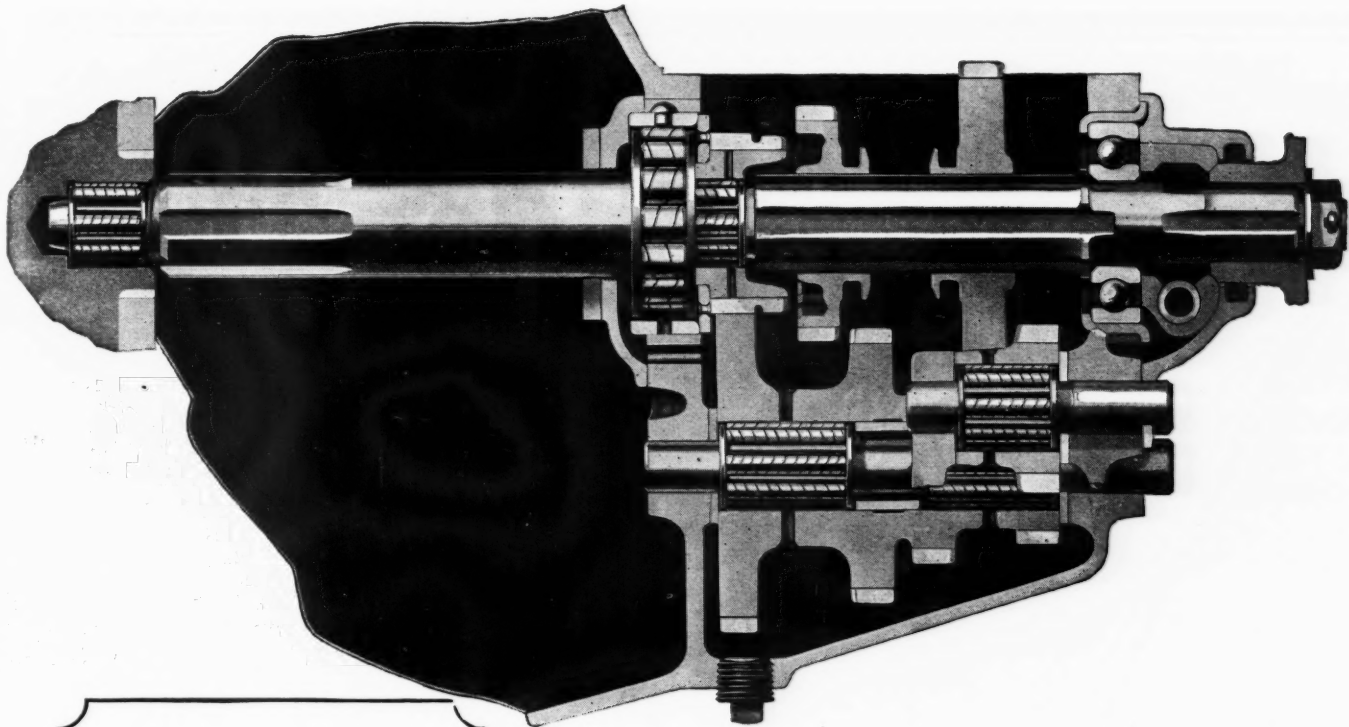
Age

Mechanical Specifications of Current Passenger Car Models—Continued

(This list comprises cars distributed on a national basis)

(From page 46,

| MAKE AND MODEL | Wheel Base (Inches) | Tire Size | Decimals-Balloons | Make and Model | Bore and Stroke | Rated H.P. | Valve Arrangement | Camshaft Drive | Piston Material | No. Main Bearings | Crankshaft Vibration | Oiling System | Oil Cleaner? | Cooling System | Thermosstat? | Radiators? | Carburetor | Air Cleaner? | ELECTRICAL SYSTEM | | Gear Set—Make | Universal—Type and Make | REAR AXLE | | BRAKES | | Steering Gear—Make | Rear Springs—Type and Location | Chassis Lubrication—Type and Make | ABBREVIATIONS—NAMES OF MFRS. OF STOCK PARTS |
|-----------------------------------|---------------------|-----------|-------------------|----------------------|-----------------|------------|-------------------|----------------|-----------------|-------------------|----------------------|---------------|--------------|----------------|--------------|------------|------------|--------------|-------------------|--------|---------------|-------------------------|------------|-------|--------|-----|--------------------|--------------------------------|-----------------------------------|---|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Marmon.....74 | 136 | 34x7 30 | 32x6 20 | Own.....74 | 6-3 1/2x5 1/2 | 33.8 | 340 | I | Al. | 3 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Bowen | A-K—Atwater Kent |
| McFarlan.....SV | 127 | 33x6 20 | 32x6 20 | Own.....SV | 6-3 1/2x5 1/2 | 27.3 | 268 | I | Ch. | 3 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | A-L—Auto-Lite |
| McFarlan.....St. 8 | 131 | 33x6 20 | 32x6 20 | Own.....St. 8 | 6-3 1/2x5 1/2 | 33.8 | 287 | I | Ch. | 3 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Al—Adams |
| McFarlan.....TV | 131 | 33x6 20 | 32x6 20 | Own.....TV | 6-3 1/2x5 1/2 | 33.8 | 287 | I | Ch. | 3 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Al—Alameda |
| Moore.....London | 128 | 33x6 20 | 32x6 20 | Own.....London | 6-3 1/2x5 1/2 | 33.8 | 287 | I | Ch. | 3 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Al—Alameda |
| Moore.....Series A | 113 | 30x5 25 | 32x6 20 | Own.....Series A | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | B-B—Borg & Beck |
| Moore.....6-60 | 108 | 29x4 75 | 32x6 20 | Own.....6-60 | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | B-B—Borg & Beck |
| Nash.....Light Six | 108 | 30x4 75 | 32x6 20 | Own.....Light Six | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Nash.....Advanced | 121-127 | 33x6 20 | 32x6 20 | Own.....Advanced | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Nash.....Special | 113 | 30x5 25 | 32x6 20 | Own.....Special | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Nash.....30E | 113 | 30x5 25 | 32x6 20 | Own.....30E | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Oakland.....96 | 110 1/2 | 30x4 95 | 32x6 20 | Own.....96 | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Overland.....91 | 100 1/2 | 27x4 40 | 32x6 20 | Own.....91 | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Overland.....93 | 112 1/2 | 29x4 95 | 32x6 20 | Own.....93 | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Packard.....136 1/2 | 125 | 32x6 20 | 32x6 20 | Own.....136 1/2 | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Packard.....143 1/2 | 125 | 32x6 20 | 32x6 20 | Own.....143 1/2 | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Packard.....6-72 | 115 | 31x5 25 | 32x6 20 | Own.....6-72 | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Peerless.....6-72 | 126 1/2 | 33x6 20 | 32x6 20 | Own.....6-72 | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Peerless.....6-80 | 116 | 32x6 20 | 32x6 20 | Own.....6-80 | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Peerless.....6-80 | 116 | 32x6 20 | 32x6 20 | Own.....6-80 | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Pierce Arrow.....33 | 138 | 33x5 25 | 32x6 20 | Own.....33 | 6-3 1/2x5 1/2 | 38.4 | 415 | T | Ch. | 7 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Pierce Arrow.....80 | 138 | 33x5 25 | 32x6 20 | Own.....80 | 6-3 1/2x5 1/2 | 38.4 | 415 | T | Ch. | 7 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Pontiac.....Six | 110 | 29x4 75 | 32x6 20 | Own.....Six | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Pontiac.....16 | 120 | 32x6 20 | 32x6 20 | Own.....16 | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Reo.....M | 131 | 32x4 1/2 | 32x6 20 | Own.....M | 6-3 1/2x5 1/2 | 30.6 | 361 | H | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Reo.....E | 131 | 32x6 20 | 32x6 20 | Own.....E | 6-3 1/2x5 1/2 | 30.6 | 361 | H | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Reo.....E | 117 | 31x5 25 | 32x6 20 | Own.....E | 6-3 1/2x5 1/2 | 25.3 | 236 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Rickenbacker.....B-8 | 121 1/2 | 33x6 20 | 32x4 1/2 | Own.....B-8 | 8-3 1/2x4 1/2 | 33.8 | 315 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Rover.....6-54-E | 118-138 | 32x4 1/2 | 32x4 1/2 | Own.....6-54-E | 6-3 1/2x5 1/2 | 29.4 | 313 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Rover.....6-54-E | 128 | 32x4 1/2 | 32x4 1/2 | Own.....6-54-E | 6-3 1/2x5 1/2 | 29.4 | 313 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Rover.....6-50-55 | 115 | 31x5 25 | 32x6 20 | Own.....6-50-55 | 6-3 1/2x5 1/2 | 25.3 | 249 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Rover.....8-88 | 138 | 32x6 20 | 32x6 20 | Own.....8-88 | 6-3 1/2x5 1/2 | 32.5 | 287 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Rover.....Silver Ghost | 143 1/2 | 32x6 20 | 32x6 20 | Own.....Silver Ghost | 6-3 1/2x5 1/2 | 33.8 | 315 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Rolla Royce.....262 | 122 | 32x5 7/8 | 32x6 20 | Own.....262 | 6-3 1/2x5 1/2 | 25.3 | 236 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Star.....4 | 103 | 30x3 1/2 | 32x6 20 | Own.....4 | 6-3 1/2x5 1/2 | 18.2 | 152 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Star....."Std. 6" | 107 | 30x4 75 | 32x6 20 | Own....."Std. 6" | 6-3 1/2x5 1/2 | 18.2 | 152 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Stearns Knight.....B | 119 | 32x6 20 | 32x6 20 | Own.....B | 6-3 1/2x5 1/2 | 22.5 | 249 | X | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Stearns Knight.....75 | 121 | 33x6 20 | 32x6 20 | Own.....75 | 6-3 1/2x5 1/2 | 25.4 | 249 | X | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Stearns Knight.....95 | 130 | 33x6 20 | 32x6 20 | Own.....95 | 6-3 1/2x5 1/2 | 29.4 | 289 | X | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Studebaker.....Sta. 6 | 113 | 30x5 25 | 32x6 20 | Own.....Sta. 6 | 6-3 1/2x5 1/2 | 27.3 | 242 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Studebaker.....Spec. 6 | 120 | 32x6 20 | 32x6 20 | Own.....Spec. 6 | 6-3 1/2x5 1/2 | 29.4 | 289 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Studebaker.....Big 6 | 120 | 32x6 20 | 32x6 20 | Own.....Big 6 | 6-3 1/2x5 1/2 | 29.4 | 289 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Stutz.....AA | 131-145 | 32x6 20 | 32x6 20 | Own.....AA | 6-3 1/2x5 1/2 | 32.5 | 287 | L | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Stutz.....60 | 118 | 30x5 25 | 32x6 20 | Own.....60 | 6-3 1/2x5 1/2 | 24.2 | 221 | I | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Willys Ste. Claire.....T6, W6 | 127 | 32x6 20 | 32x6 20 | Own.....T6, W6 | 6-3 1/2x5 1/2 | 25.4 | 274 | I | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Willys Ste. Claire.....B.C. & D68 | 127 | 32x6 20 | 32x6 20 | Own.....B.C. & D68 | 6-3 1/2x5 1/2 | 33.8 | 265 | I | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Willys Knight.....65 | 126 | 32x6 20 | 32x6 20 | Own.....65 | 6-3 1/2x5 1/2 | 25.4 | 236 | X | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |
| Willys Knight.....70 | 113 1/2 | 30x5 25 | 32x6 20 | Own.....70 | 6-3 1/2x5 1/2 | 20.7 | 178 | X | Ch. | 4 | N | P | F | Pu. | N | N | Ray. | N | N | Delco. | Delco. | Own..... | m-Spl..... | 4 1/2 | Var. | E-R | Own..... | Own..... | Ow..... | Pr—Al |



Hyatt

**Subdues and blends gear noises into a uniform tone of pleasing quality.*

Permanence, due to durability.

Quietness, due to dampening of gear noise.

Maintenance of quietness, due to minimum wear.

Ease of assembly.

Uniform production output.

No locking, or adjusting provision is required.

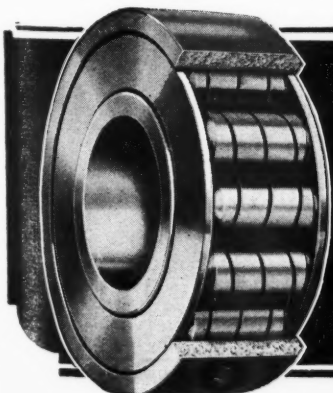
*Hyatt Equipped Transmissions Have a Pleasing Tone Quality

Hyatt equipped transmissions are recognized for their evenness of tone. Hyatt Quiet Bearings, acting as dampeners of vibration, subdue and blend usual gear noises into a uniform tone of pleasing quality.

Used at all vital bearing points in your transmission, Hyatt Roller Bearings will dampen objectional gear noises with the resulting appeal of refinement.

HYATT ROLLER BEARING COMPANY
NEWARK DETROIT CHICAGO SAN FRANCISCO
Worcester Philadelphia Charlotte Pittsburgh Cleveland

THE BORN OF OFFICIAL HYATT SERVICE



HYATT

QUIET ROLLER BEARINGS



Get This FREE Booklet!

Tells How To
Increase Your
Winter Profits

CHROMINE Is Going Big!

GOOD news travels fast. If you don't know about Chromine, you should. If you have never sold a freeze-proof, it is time you did—and the one that you can handle with the most profit, least risk, and the most satisfaction to your Customers,—is **CHROMINE**—The Super Radiator Freeze-Proof.

Can be stored in any quantity without fire hazard.

The growing popularity of Chromine is visible evidence of the fact that

*Sold from Drum
to Radiator*

motorists are demanding a freeze-proof that does not evaporate.

Judging from the orders already booked from live Dealers and Jobbers, Chromine is on its way to its biggest Season.

Get your copy of the **CHROMINE BOOKLET** and read the evidence—why you should order from your Jobber now.

Chromine will not evaporate

Chromine
REG. TRADE MARK
RADIATOR
FREEZE-PROOF SOLUTION

PYRENE MANUFACTURING CO., Newark, N. J.
Makers of Pyrene Fire Extinguishers and **OFF'N'ON** Tire Chains

Here's what you've been waiting for **The BRUNNER**

A NEW Hydraulic Car Washer by Brunner built in one or two gun models. Will develop 300 lb. pressure for chassis cleaning yet adjustable to a harmless spray for body work.

Here's a simple, sturdy, compact washer designed in every detail for the automotive washrack.

Dependable, thorough, speedy, it cuts the time and labor costs of former methods in half and pays for itself in a short time.

Built with Brunner precision, backed by 20 years of automotive experience and the Brunner guarantee.

Write for complete information at once.

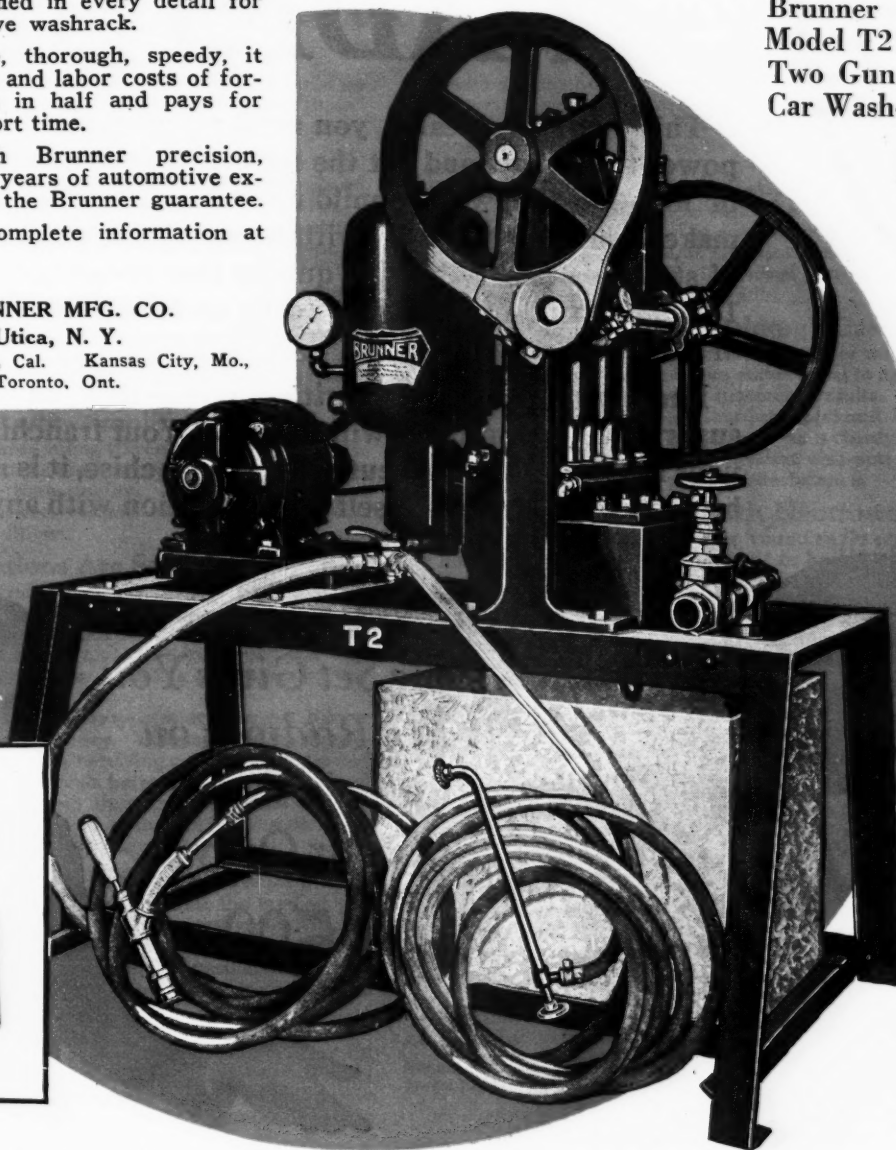
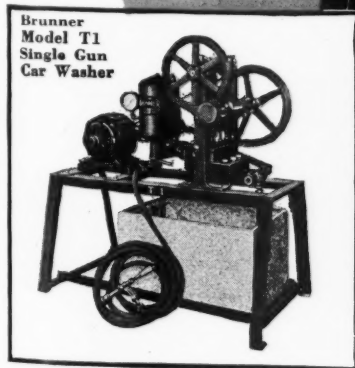
BRUNNER MFG. CO.

Utica, N. Y.

San Francisco, Cal. Kansas City, Mo.,
Toronto, Ont.

CAR WASHER

Brunner
Model T2
Two Gun
Car Washer



BRUNNER

Hydraulic Car Washer

Brunner Mfg. Co.
Utica, N. Y. Dept. M. A.

Gentlemen: Please send me the Car Washing Folder.

Name _____

Address _____

if You Pay - \$1,000 You Can't Buy a Better RADIO SET

This year, Mr. Dealer, you need a real radio set—a radio with the power to step out and get the far-off stations on all wave lengths, high or low—with power to build up weak signals from small stations and make them into “radio”—with selectivity to separate the vast number of stations—and with tone quality that preserves the magic of music. That’s the kind of radio that keeps on selling itself to a widening circle of friends.

Radio buyers are more critical now—they have to be sold. Only superlative performance will sell them. Your franchise is only as good as your radio set. If it’s a Neutrowound franchise, it is *right*. Neutrowound has never failed to sell itself in competition with any radio at any price.

This Super-Power
Six-Tube Set Gives You
All the Radio You
can Buy at Any
Price for Only
\$9500



1927 Model—Super-Power Neutrowound

Neutrowound Radio Receiving Sets are manufactured under our own patents and under a Reciprocal License from the Navy Department of the United States Government

The "Go-Getter" of Radio!

Unequalled for Range and Power

Here is Power to bring in the distant stations—power to build up the weak signals from smaller stations and make them into "radio"—super power perfectly controlled, from a whisper to a roar.

Super-Power Under Positive Control

The Neutrostat is a specially designed unit—used exclusively on the Neutrowound—that controls the oscillation of the set on all wave lengths, reduces "B" battery consumption, and enables distant stations to be tuned in with the volume and clarity of local stations.

The Neutrostat actually makes it possible to "build up" the strength of any signal, that has sufficient intensity to be detected, to the power and volume of local reception.

The Neutrostat provides control of the signal strength where it is most effective—in the radio-frequency circuits and before detection takes place. Thus distortion due to overloading the detector is avoided.

3 Stages of Audio-Amplification

NEUTROWOUND has three tubes (three stages) of audio-frequency amplification. That tells the story—radio without a compromise—power with pure tone quality. You get that perfect balance between selectivity and volume which is necessary to meet the varying radio conditions.

How the Stations Are Separated

The specially designed Straight Line Frequency, Variable Condensers, used exclusively in the Neutrowound, space out the stations evenly on the dials. They are designed and manufactured to close precision limits, to give absolute straight line frequency dial calibration, and prevent the piling up or crowding of stations on one dial setting.

These condensers are of the low loss type, which insures sharper tuning and greater receiving efficiency. They are designed especially for the purpose of tuning the receiving circuit to any desired wave length, or station. The intervals between the stations are all equal—the separation is the same throughout the entire wave band—therefore all stations come in with positive regularity at exactly their allotted space on the dials.

Neutrowound Efficient—Not Neutralized

A radio receiver is most efficient, weak signals the loudest, just below the point of oscillation—and this ideal point varies with the different wave-lengths being tuned. Naturally a radio set that cannot be tuned to a point just on the verge of oscillation for each and every wave-length cannot give the best in tuning range and station-getting ability.

Neutrowound is built on the idea of controlling the power instead of neutralizing it. Oscillation can be prevented or produced at will at every point on the dial—it is under absolute control for every wave-length. Likewise the point of highest efficiency—impossible to attain with neutralization—is always right at your finger tips with the Neutrowound.

\$95

Buys a NEUTROWOUND Six-Tube, Super-power set, and you couldn't buy more radio if you spent a thousand dollars.

West of Rockies, \$100.00 In Canada, \$128.00

Station WOK—operating on 5000 Watts—wave length 217.3 meters—owned and operated by NEUTROWOUND RADIO MFG. CO., Homewood, Ill.

NEUTROWOUND RADIO MFG. CO.

Dept. 865, HOMEWOOD, ILL.

Radio Division Advance Automobile Accessories Corporation

Why It Has 3-Dial Control

A radio set has three distinct circuits, each tuned by a variable condenser. Efficient tuning of distant stations depends upon putting these three circuits into resonance with each other and with the broadcasting station. This can be done only by individual control of each condenser.

NEUTROWOUND'S outstanding station getting ability is recognized wherever good radio is known. We are unwilling to sacrifice in the least this first essential of a radio set in a futile attempt to do something which, in itself, is electrically and mechanically impossible. Neutrowound retains individual control of variable condensers as indispensable to good radio.

All-Metal "Shielding" Case

The Neutrowound is the first radio set ever made with an all-metal case. Radio engineers have endeavored to apply the shielding principle—without obtaining successful results. Our engineers have developed and perfected this principle, and have designed an all-metal case that not only serves as a sturdy protection for the vital parts of the receiving set—but also acts as an electromagnetic shielding against outside interference.

Cut Down Static with Neutrowound

Neutrowound owners enjoy year 'round radio reception. They are able to tune out most of the static or background noises that infest other radio sets. Static comes through when the radio-frequency tubes are pushed in order to get audible volume. When only two stages of audio-frequency amplification are used, a stronger signal must be delivered to the detector. Consequently, the radio-frequency tubes must be worked harder, permitting the static to crash through.

Neutrowound's three stages of audio-frequency amplification deliver sufficient volume from a weak signal to permit tuning down the radio-frequency tubes and thus cutting down static.

Only One Model—Easy to Sell

Neutrowound is made in but one model—a precision instrument of the finest quality—handsomely finished. In this one model is contained all the radio that it is possible to buy at any price.

No Cut Prices—No Bargain Sales

Neutrowound is sold exclusively through Authorized Distributors and Sub-Distributors—who are fully protected. It is not sold by "Gyps," Department Stores or Cut Price Stores, yet during the past season we were absolutely unable to build enough sets to fill the flood of orders that we received. It was the outstanding success of the year—yet there was not a single Neutrowound Set advertised at "Bargain Prices" throughout the entire United States.

DEALERS: Fill out and mail coupon for full information about the 1927 Super-power NEUTROWOUND and exclusive territory proposition to sub-distributors.

Dealers Coupon

NEUTROWOUND RADIO MFG. CO.

Dept. 865, Homewood, Ill.

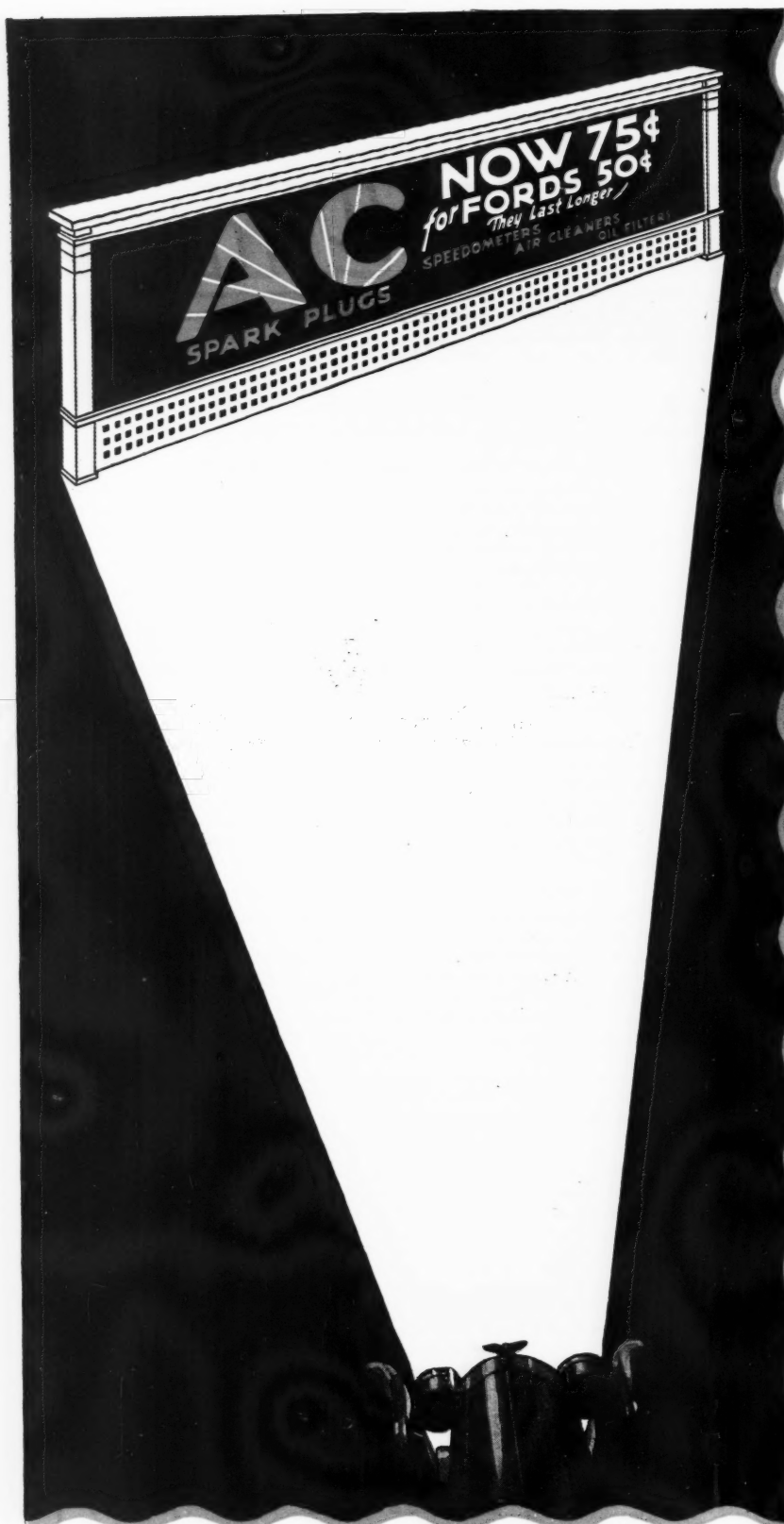
Send complete information Dealers' Discounts and Neutrowound Sales Plan.

Name.....

Street.....

City.....

State.....



Why AC Spark Plugs—

Have the biggest demand and the greatest sales possibility for the dealer.

Because—

The following cars and 124 others use them as original equipment.

BUICK
CADILLAC
CASE
CHANDLER
CHEVROLET
CHRYSLER
CLEVELAND
DAVIS
ESSEX
FLINT
HUDSON
JEWETT
KISSEL
MARMON
McFARLAN
NASH
OAKLAND
OLDSMOBILE
PAIGE
PONTIAC
STAR
STEARNS-KNIGHT
WILLS SAINTE CLAIRE

AC equipment business—today more than 50% of the entire car production—offers big sales possibilities because of the assured replacement demand from owners of AC-equipped cars.

Now Popularly Priced

AC or AC Carbon Proof, 75c
AC 1075 (for Fords) 50c

Heavily advertised through painted highway bulletins, national magazines, newspapers and dealer helps.

Likewise they are the most profitable for the dealer to sell.

AC Spark Plug Company

FLINT, Michigan

AC-SPHINX
Birmingham
ENGLAND

Makers of
AC Spark Plugs
AC Speedometers
AC Air Cleaners
AC Air Filters

AC-TITAN
Levallois-Perret
FRANCE

AC Speedometers

The AC Speedometer for Fords—now \$10.00—is a full-sized speedometer, registering speed, total and trip mileage, the same previously sold at \$15.00.

AC Air Cleaners

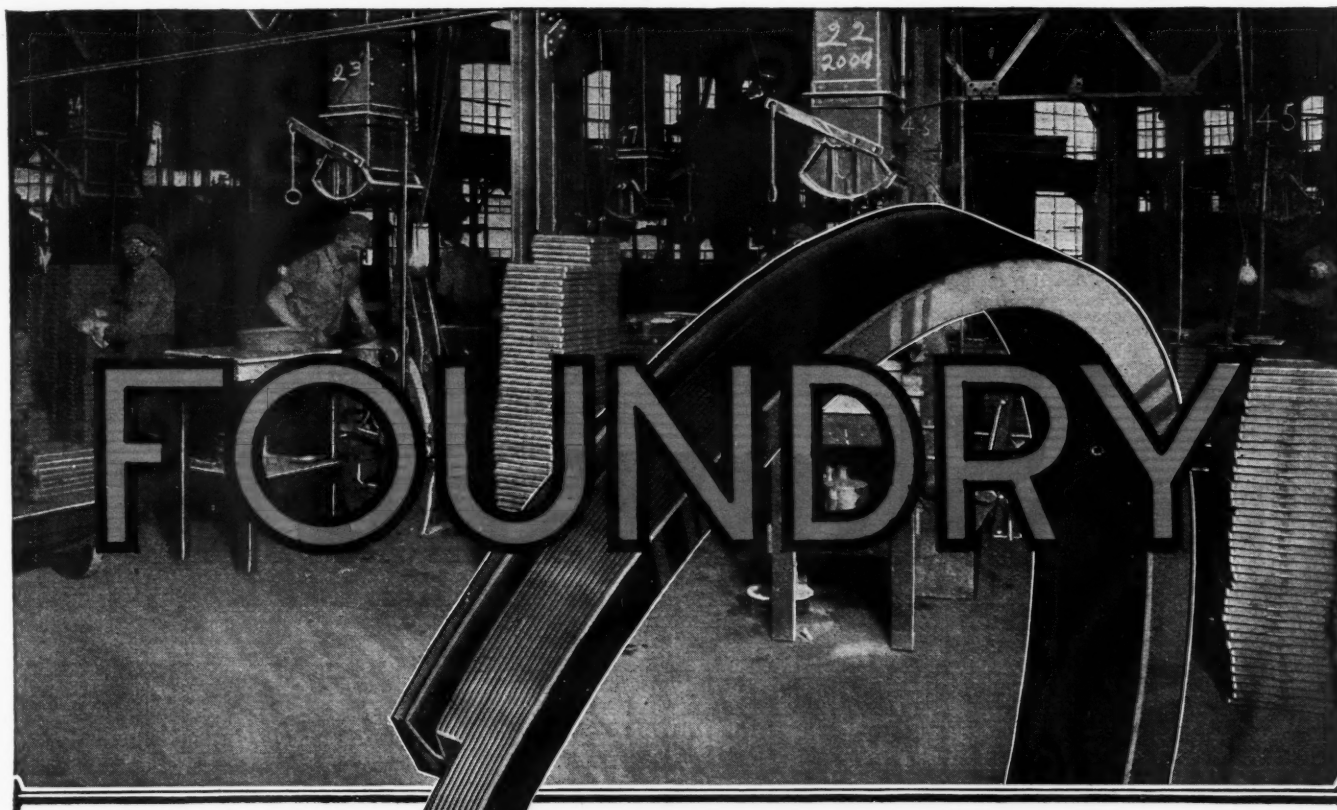
Prevent dust from entering the engine through the air intake of the carburetor.

Packed complete with all installation attachments—easily mounted and reasonably priced.

AC Oil Filters

Positive protection against engine wear.

Keeps the oil clean, making it unnecessary to change oil every 500 miles.



NO-LEAK-O Piston Rings

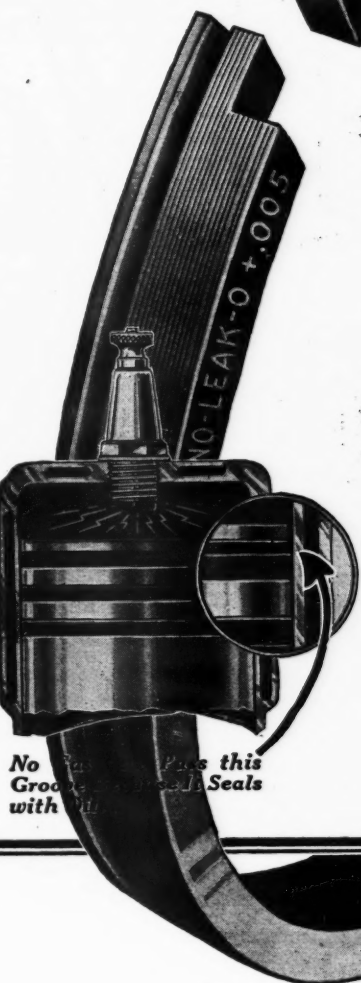
This illustration of new foundry where all Quality Brand Piston Rings are cast shows molding machines, sand conveyors and a small section of 90' diameter turntable which conveys molds to cupolas. Fifty-six molding machines are around this turntable. Because of massive equipment it is impossible to give through photography an accurate impression of this enormous daylight foundry where efficient, sanitary and healthful conditions prevail.

The effective No-Leak-O installation with top ring inverted minimizes crank case dilution. Unburned gasoline and kerosene is forced out through exhaust with the burned gas.

The 45° angle grooves of the second and third No-Leak-O rings constantly refill with fresh oil which maintains a positive seal between pistons and cylinder walls.

The result is high compression and maximum power.

Service Division—Oil Ring Department.



The Piston
RING COMPANY
Muskegon, Michigan

PEERLESS

Shows a

26 1/4%

GAIN

**for the First
Six Months**

Any Peerless dealer or distributor will tell you why --

HE'LL tell you that three Peerless models—three different price ranges give him three separate and distinct chances for profitable business.

He'll tell you that each Peerless model stands head and shoulders above others in its price class.

He'll tell you that Peerless value is higher than ever before—and it has always been high.

And—what is exceedingly important to any car dealer—

he'll tell you that the company back of him is one of the soundest institutions in America—not only financially but in its manufacturing and sales policies as well.

Today, Peerless offers a good dealer—a live distributor—an opportunity unequalled by any other in the automobile field.

If Peerless is not represented in your locality, write, wire or phone for details of the franchise.

PEERLESS MOTOR CAR CORPORATION, CLEVELAND, OHIO
Peerless has ALWAYS been a good car

Export Dept.: Fisk Building, Broadway at 57th St., New York City • Cable Address: "Peermotor, New York"
Manufacturers of the 90° V-type Eight-69, the Powerful Six-72 and the Remarkable Six-80

Three different cars Three price ranges

The Remarkable Six-80

| | |
|--|--------|
| Sport Phaeton | \$1395 |
| Roadster | \$1495 |
| 2-Door Sedan | \$1545 |
| 4-Door Sedan | \$1595 |
| 5-Passenger De Luxe Sedan | \$1795 |

The Powerful Six-72

| | |
|--|--------|
| 5-Passenger Phaeton . . | \$1895 |
| Sport Roadster | \$2195 |
| 5-Passenger Coupe . . . | \$2295 |
| 5-Passenger Sedan . . . | \$2395 |
| 7-Passenger Sedan . . . | \$2595 |
| 7-Passenger Limousine . | \$2695 |
| 5-Passenger De Luxe Sedan | \$2795 |
| 7-Passenger De Luxe Sedan | \$2995 |

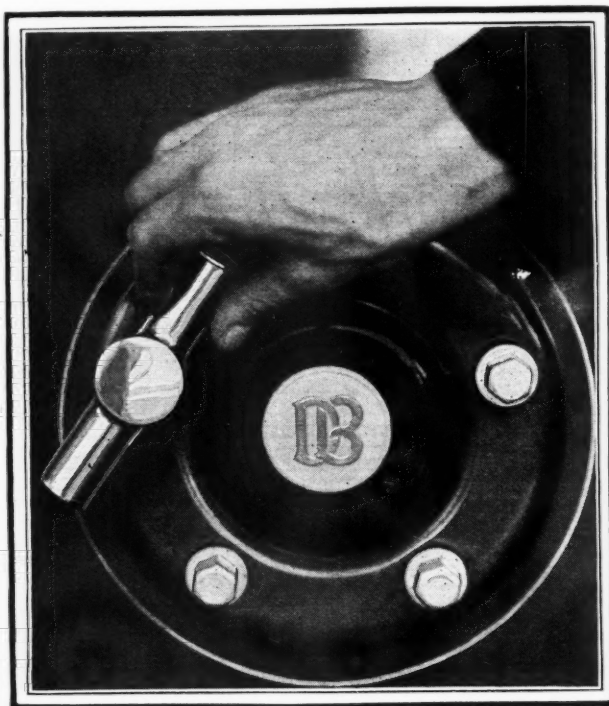
The Famous 90° V-type Eight-69

| | |
|--|--------|
| Roadster | \$2995 |
| 5-Passenger Town Sedan | \$3495 |
| 7-Passenger Suburban Sedan | \$3595 |
| 7-Passenger Berline Limousine | \$3795 |

[All prices f. o. b. factory]

A lock built on a new principle

The Pines Steel Wheel Lock gives the car-buyer real protection.



Leading Nash and Dodge distributors are using it with complete success.

HERE is a Pines Lock that lives up in every way to the standards set for our lock business.

We started making locks because we felt the motor public would buy an honest, well-made, *protective* lock. One that was ornamental as well as efficient. Already over 20,000 Pines locks are in use in Chicago alone—and all making good.

Listing at \$5, model "D" shown here will be a money-maker for Nash and Dodge distributors everywhere. Other Pines models to fit other makes of cars.

MODEL "D"

The Arms Revolve

The hardened bushings in the Pines model takes the place of a nut on the carrier. The arms act as a wrench when the proper key is in the lock. A key turned in the lock slides a bolt into a hole in the threaded bushing. It is then placed on one of the bolts which holds the spare wheel on the carrier and screwed up tightly. The key is withdrawn letting the arms revolve without moving the threaded bushing. It makes no difference how large a wrench the thief may use, because the lock is loose when locked—and only the proper key will let one remove the lock from the wheel.

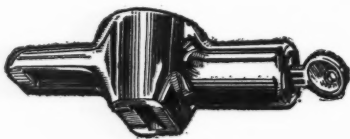
Model "D" fits all the following models having steel wheels: Cleveland, Dodge, Nash, Overland, Peerless, Willys-Knight; all other cars using Budd-Michelin steel wheels.

The line is complete. Prices from \$3.50 to \$6.50 with many of the most popular models at \$5.

Tell us whether you're a car distributor or interested in our entire line and we'll see that you are shown samples of Pines Locks.

Prices are right, our policies are fair and Pines Locks are made by a firm you know (we make the famous Pines Automatic Winterfront) and can rely on in every way.

Fill in and mail this handy coupon. No obligation.



Patent Pending

MODEL "E"

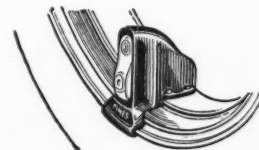
Steel Wheel Lock for carrier having flat angle piece with hole for padlock.



Patent Pending

New Pines "Steel Hard"

Case-hardened steel chain, 11/32 inches, covered with unbreakable thief-proof lock



Pat'd June 8, 1926

MODEL "R"

A massive, unbreakable base surrounds and protects rim-wedge of this new Pines model

FILL IN, CLIP AND MAIL THIS TODAY

H-401, LOCK DEPT., PINES WINTERFRONT CO., 408 N. SACRAMENTO BLVD., CHICAGO

Please show us: ☐ Your entire line of locks
(Check which) ☐ Send sample of one of your
locks to fit Car
Model..... No obligation in either case.

Name..... Address.....
City..... State.....
☐ Jobber ☐ Dealer ☐ Car Distributor (Please check which) MA 8-5-26



Now You Can Sell 'em All

SELL Arvin Heat to ALL of 'em—for ALL cars—regardless of make or model! Make no exceptions whatever—there's an Arvin Heater for EVERY car now! Every cold car is "ready money" for you if you can keep enough Arvins in stock to supply them. Over a million Arvin Heaters have already been sold to Ford, Chevrolet, Overland and Dodge owners. Think what sales will be now that there's an Arvin for every car. There'll simply be no limit to your profit opportunity. Arvin Heating efficiency—complete line—low price—and a national advertising campaign that will hit the car owner right smack in the eye—in The Saturday Evening Post, American Magazine and Country Gentleman. That's some combination. Get your Arvins early and watch 'em move.

INDIANAPOLIS PUMP & TUBE COMPANY

General and Sales Offices—INDIANAPOLIS

Also Makers of Indianapolis and De Luxe Tire Pumps, Automobile Jacks and Dan Patch Coaster Wagons for Children

ARVIN HEATER

ARVIN SPECIAL Manifold Heater for

| | |
|---------------|--------|
| FORD | \$6.00 |
| FORD Hot Spot | \$6.00 |
| CHEVROLET | \$6.50 |
| DODGE | \$9.00 |

ARVIN REGULAR Manifold Heater for

| | |
|--------------------|--------|
| FORD | \$1.75 |
| OVERLAND-4 | \$3.00 |
| STAR-4 | \$3.00 |
| HUDSON | \$6.00 |
| CHRYSLER-60 and 70 | \$6.00 |
| NASH Special-6 | \$6.00 |
| STUDEBAKER Std.-6 | \$6.00 |
| BUICK Standard-6 | \$6.00 |
| BUICK Master-6 | \$6.00 |
| HUPMOBILE-6 | \$6.00 |

ARVIN UNIVERSAL Exhaust Heater for

| | |
|----------|--------|
| ALL CARS | \$7.50 |
|----------|--------|



They Sure Do Heat!

Which Will Win It?

High
List Prices

ORDINARY
BRAKE LINING

THERMOID
BRAKE LINING

MORE
BUSINESS
FOR THE
GARAGE
MAN

37% to 50%
Lower List
to Car Owner

Thermoid

The Asbestos Brake Lining



Thermoid Brake Lining Service

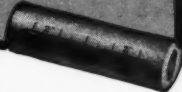
THERE are any number of brake linings on the market—and then there's Thermoid.

Thermoid is the one brake lining which offers your customers something none of the others can. When you make yours a Thermoid shop you give your old customers a real reason for sticking to you, and new customers a real reason for coming to your shop.

When you come to think of it, you can't blame the motorists of America for preferring Thermoid. Thermoid Hydraulic-Compressed Brake Lining with its exclusive "all weather" feature gives them a perfect and dependable brake action in any and all weathers—at 37% lower than standard list price to the car owner. Thermoid Interwoven Lining, a top notcher among woven linings, comes to them at 50% less than the usual list.

"Better lining at a lower price" is a double barrel argument that's hard to beat. And it is an argument we have been putting up to the motorist for months past in such great national magazines as *The Saturday Evening Post*, *Liberty*, *Collier's*, etc.

Make your shop a Thermoid Service Station and stamp it as a "Quality and Fair Price Shop."




Thermoid Radiator Hose

The perfect radiator hose. Specially constructed to withstand the action of oil, anti-freezing solutions, hot and cold water. Thermoid Radiator Hose will not swell during service nor will the plies or the tube separate.

Like Every Thermoid Product—It WEARS

THERMOID RUBBER COMPANY Factories and Main Offices TRENTON, N. J.

*Makers of Thermoid and Rexoid Transmission Lining,
Thermoid-Hardy Universal Joints, Thermoid Radiator
Hose and Mechanical Rubber Goods*



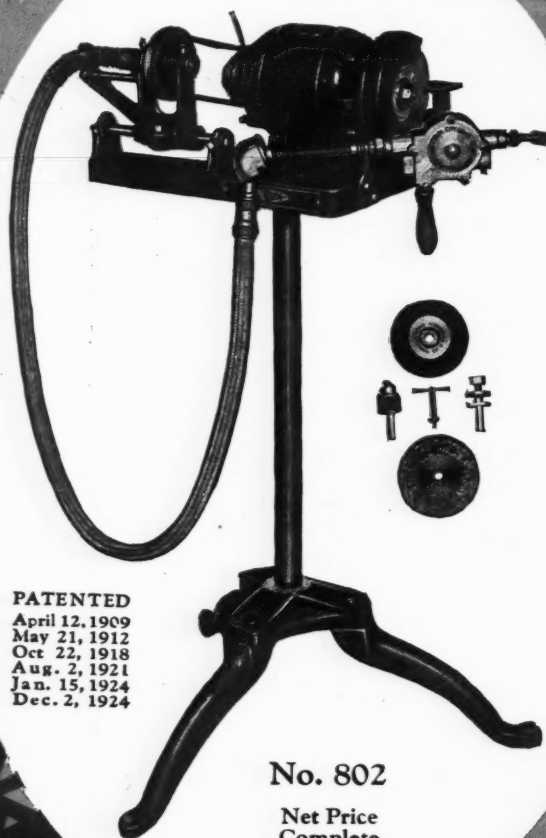
Thermoid-Hardy Universal Disc

If it's service you want make your universal joint replacements with Thermoid-Hardy Discs. The Thermoid-Hardy's patented fan-wise fabric construction outlasts metal. It absorbs jolts and requires no oil or care.

Like Every Thermoid Product—It WEARS

Hydraulic Compressed
Brake Lining
"For short stops and long service"

FLEXIBLE SHAFT AND ATTACHMENTS



PATENTED
April 12, 1909
May 21, 1912
Oct 22, 1918
Aug. 2, 1921
Jan. 15, 1924
Dec. 2, 1924

No. 802

Net Price
Complete

\$123.75

SIoux
Trade Mark Reg U.S. Patent Office

The Handiest, Most Useful Power Tool you ever saw!

The most efficient and dependable power tool made---for drilling, grinding, polishing, buffing, paint-removing, valve-lapping, carbon-cleaning and many other uses. The easiest tool to work with---*no heavy bulky machine to hold up!* It easily gets into places that are difficult to reach with ordinary power tools. The handy clutch starts and stops the tool at will, with a simple twist of the wrist.

The best tool for valve-lapping! *The three speed pulley* give you correct speed for different size valves---low speed for large valves, high speed for small valves.

Your Jobber Sells It

ALBERTSON & CO.

SIoux CITY, IOWA

— — **Now any dealer can
make money selling tire chains
— with only 6 sizes of stock
to fit every tire
that is made —**

The *Hodell* Tire Chain Sales and Service Station

A revolutionary development in selling tire chains!

Here is a complete tire chain business—service station, stock and permanent selling display—all within 9 square feet of floor space.

The owner of the Hodell service station can fit every passenger car tire that is made from the six standard widths of ladder length stock. He's never "out" of any size. To sell a set of tire chains the operator simply refers to his chart, cuts the exact length of the proper width of tire chain stock, attaches fasteners—and the sale is made!

Hodell stock comes with standard twisted-link cross chains assembled. Attaching fasteners is a few minutes' work with the special tools provided. There is no guess work in cutting the right length to make a set. It's all worked out on the chart—simply, briefly, accurately. Just a few minutes' work to make and sell a set of custom-made tire chains that fit the tires accurately!

Be the first to offer this better kind of tire chain service. Be the first to profit. The complete equipment—service station, tools and stock sell for about \$200.00.

THE CHAIN PRODUCTS CO

Established 1886

3928 Cooper Avenue

Cleveland, Ohio

Hodell Tire Chains



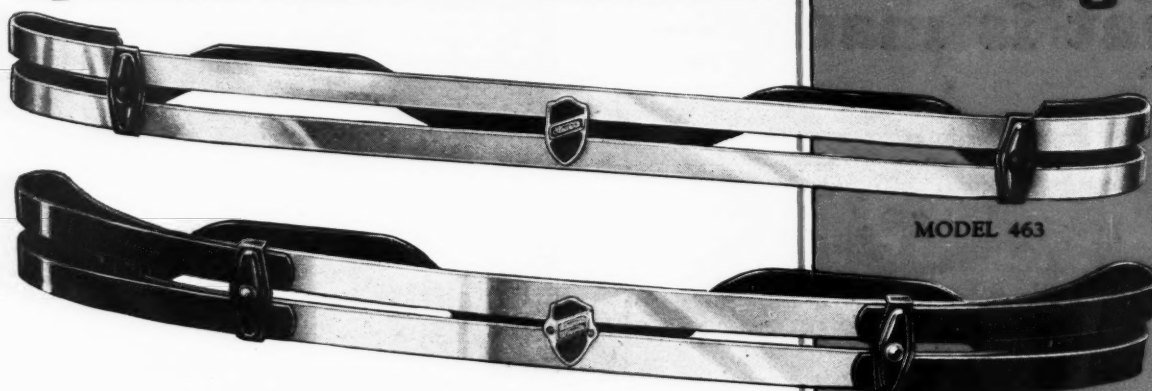
Hodell Tire Chains as supplied in ladder lengths as stock for these cabinets are standard in every respect. Twisted link brass plated cross chains, cased to diamond hardness, galvanized side chain, all full weight and count; highest quality obtainable.



Our policy is restricted distribution. Reservations for territory allotments for Jobbers are now being closed. Wire for information.

STEWART-WARNER

The New Improved Safety Bumpers— Special Steel of Great Tensile Strength



MODEL 463

MODEL 465

Superior Features of Stewart-Warner Bumpers

- 1** There is not a single cast part about any Stewart-Warner Bumper.
- 2** A special alloy steel is used for all Stewart-Warner Bumper Bars, to insure special qualities of strength and toughness.
- 3** The reinforcing spring bar is selected steel, designed to take advantage of the strength gained by truss construction.
- 4** The brackets are of alloy steel!
- 5** The bolts holding the brackets to frame are according to standard S. A. E. Specifications.
- 6** Stewart-Warner Bumpers are shipped assembled ready for bolting to brackets and frame of car.
- 7-A.** Stewart-Warner Nickel finish is subjected to a salt spray test agreeing to Bureau of Standards formula and will hold its brightness without rusting for a period far longer than the ordinary.
- 7-B.** The 465 Model above has a solid strip of nickel alloy across the front. This strip is absolutely rust-proof and will always retain its original finish.
- 8** All Stewart-Warner Bumpers are approved by the Underwriters' Laboratories.
- 9** Dealers are protecting their own best interests when they sell Stewart-Warner Bumpers that give 100% protection to the car owner's property and retain their beauty for the life of the car.

STEWART-WARNER SPEEDOMETER COR'N, 1826 Diversey Pkwy., Chicago, U. S. A.

Stewart-Warner Products

Shock Absorbers
Bumpers
Spotlights
Rear Fender Guards
Electric Horns
Electric Windshield Cleaners
Rear Vision Mirrors
Speedometers
Heaters
Vacuum Tanks

Matched-Unit Radio

The most ideal radio for the dealer. The entire set and accessories made by one firm—Stewart-Warner. Instrument, Tubes, Reproducer and Accessories MATCHED for complete radio satisfaction.

TUNE IN

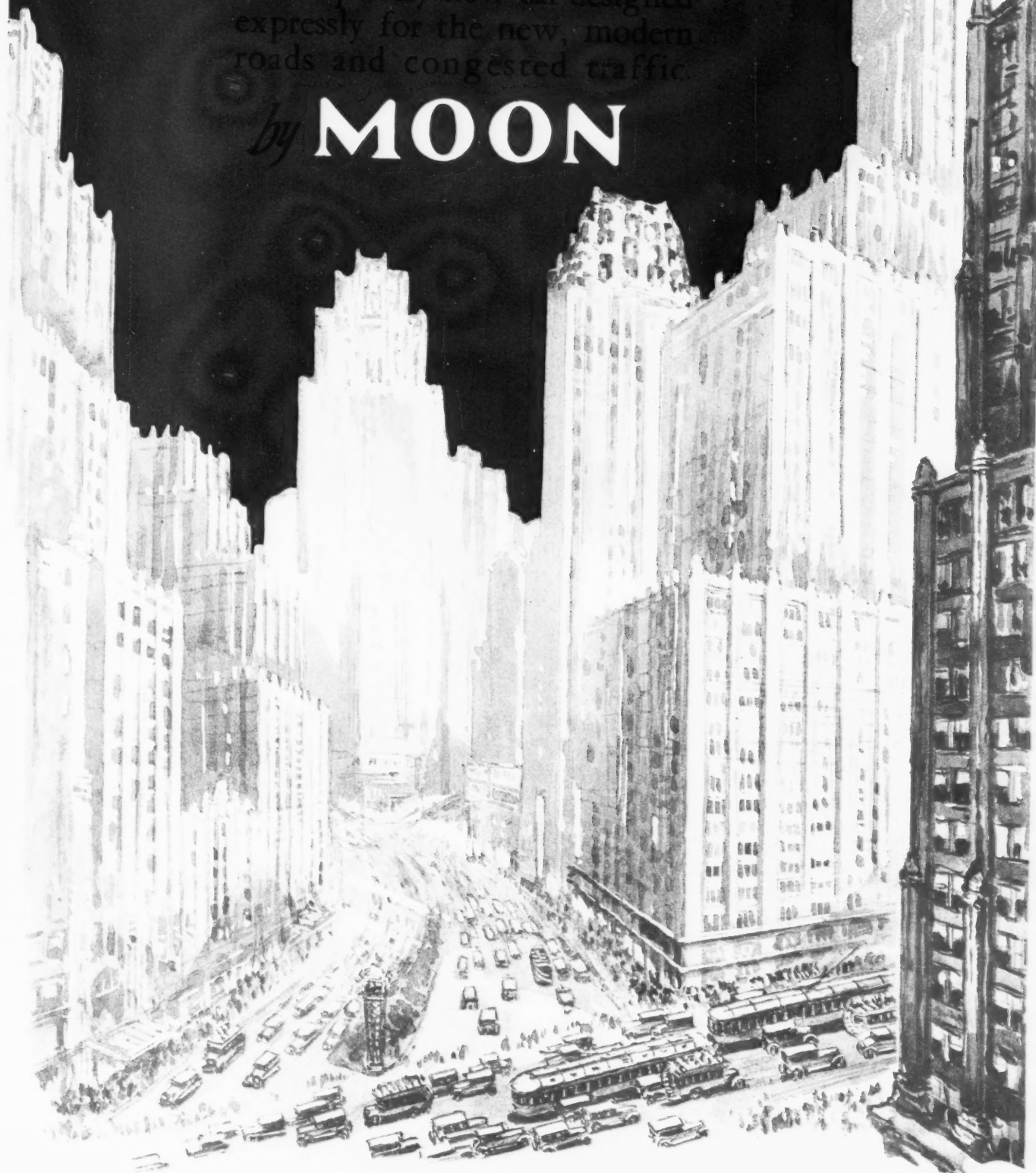
Stewart-Warner Air Theatre
W. B. B. M. 226 Meters

TWELVE MILLION PEOPLE ARE TODAY USING STEWART-WARNER PRODUCTS

A Revolutionary
**EUROPEAN-AMERICAN
TYPE LIGHT SIX**

A completely new car designed
expressly for the new, modern
roads and congested traffic.

by **MOON**



CELEBRATING 20 YEARS OF WORLD-WIDE SUCCESS

The New Jubilee

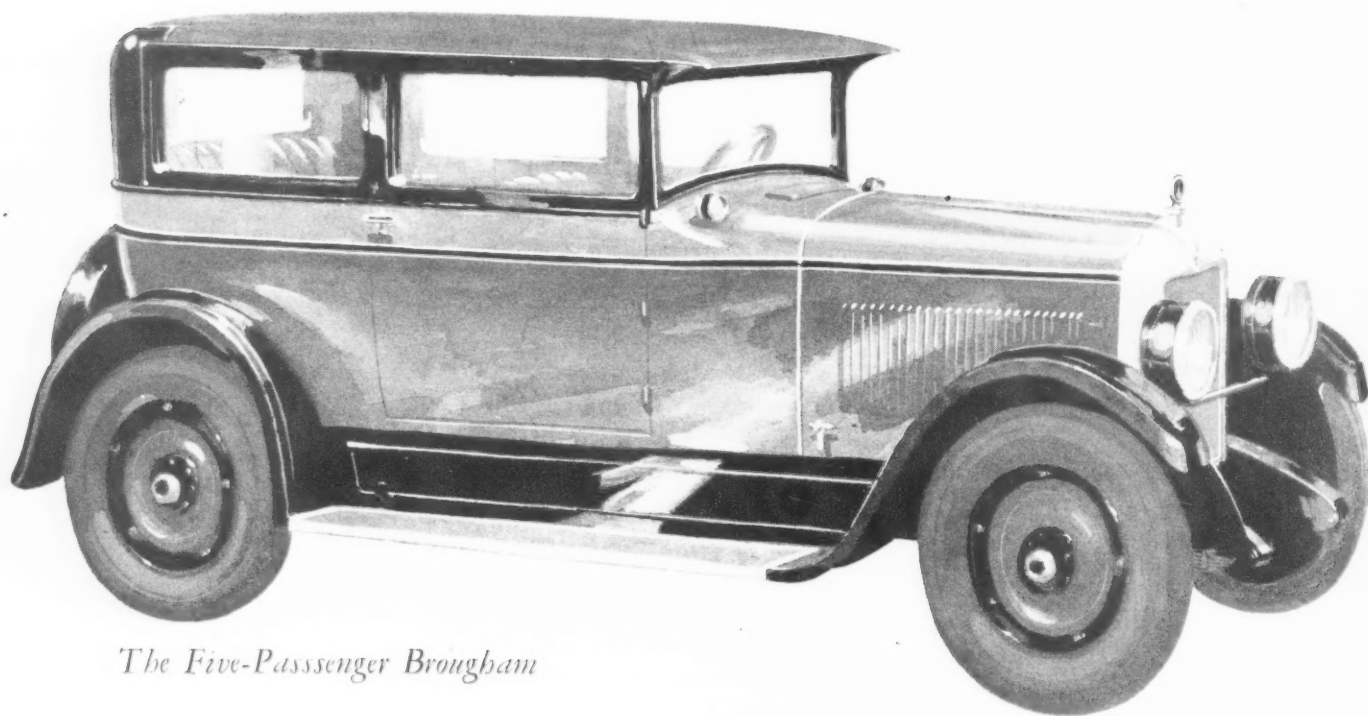
New Conditions Revolutionize Motor Design

Next Thursday, August 5th, the Jubilee Moon "6-60" will be unveiled on the floors of Moon distributors.

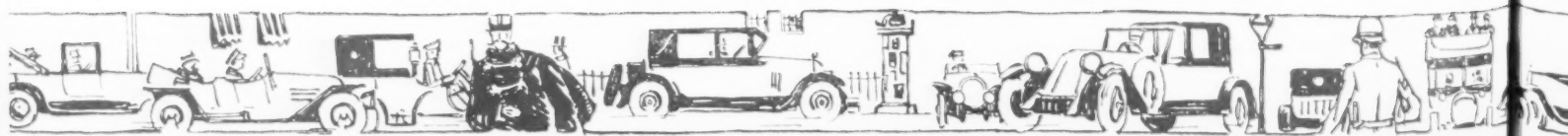
Three billions in new, hard, fast roads, growing at the rate of a billion a year, stretch from ocean to ocean. Meantime, cars have increased to 20,000,000. Long lanes of motors crowd

through the downtown canyons of city traffic. Everywhere congestion is on the increase. Drivers face traffic conditions that did not exist three years ago.

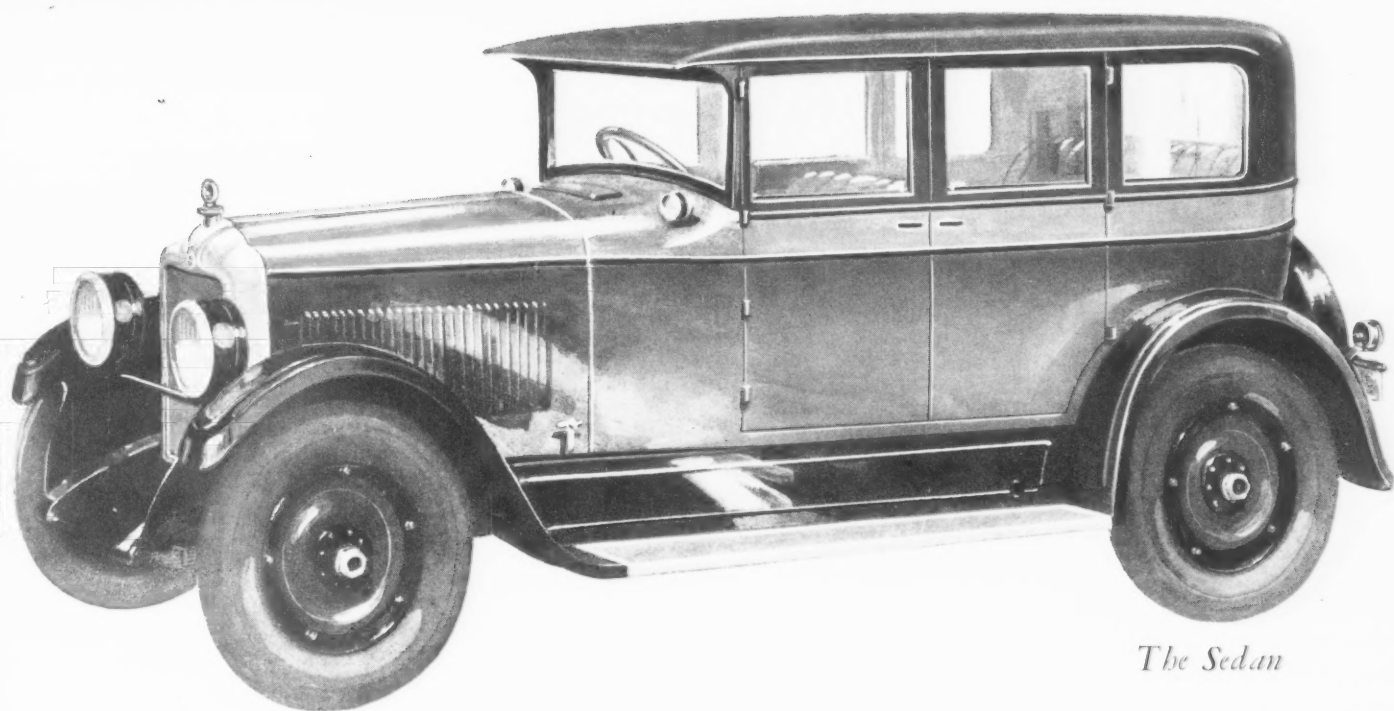
This type had to come. You have wanted just such a car for a long time. Your public has insisted on it, demanded it.



The Five-Passenger Brougham



MOON 6-60



The Sedan

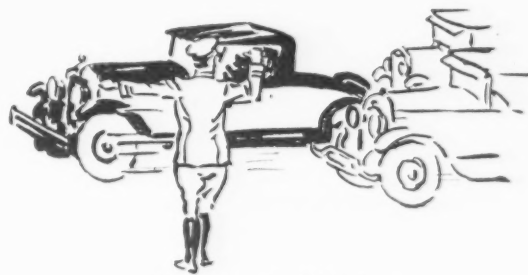
Styled in Europe, Built for America

The Moon "6-60" is a complete new car of European-American type, designed expressly from start to finish to meet these new revolutionary conditions.

It is compact, low, roomy, light like the European type, but adapted throughout to meet America's traffic needs.

Its high-torque motor gives you great driving speed, tremendous acceleration, high pulling power at low speed and extreme flexibility.

You can get 22 miles to the gallon of gasoline from the long-stroke motor of the "6-60". You can shoot its speed from 5 to 25 miles in $7\frac{3}{4}$ seconds and then up to 60 miles an hour.



First past the GO sign!

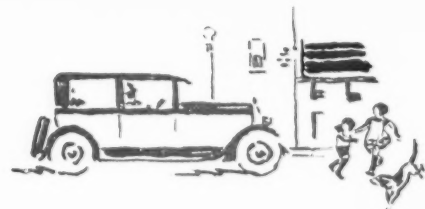


The New Jubilee

Designed for Women, too

Millions of women drivers demand easier steering and parking. With the "6-60" you can turn in a 39-foot radius and park in a 14-foot space with one hand. And the patented steering gear which makes this possible also self-centers the front wheels.

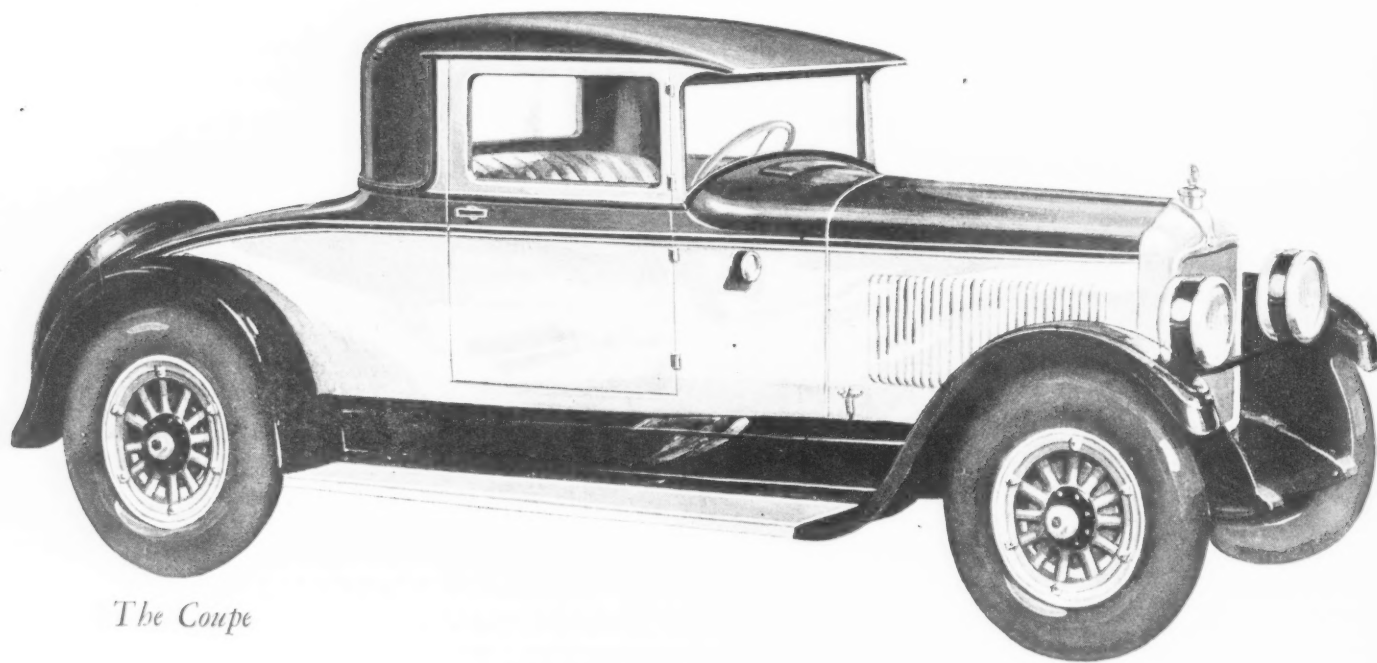
Increased congestion demands safer conditions for driving. Brakes must work more quickly, surely, smoothly. The Moon Lockheed four-wheel



Four safe, dependable hydraulic brakes

hydraulic brakes insure a safe, positive stop—and they are the only kind that stay equalized against skidding.

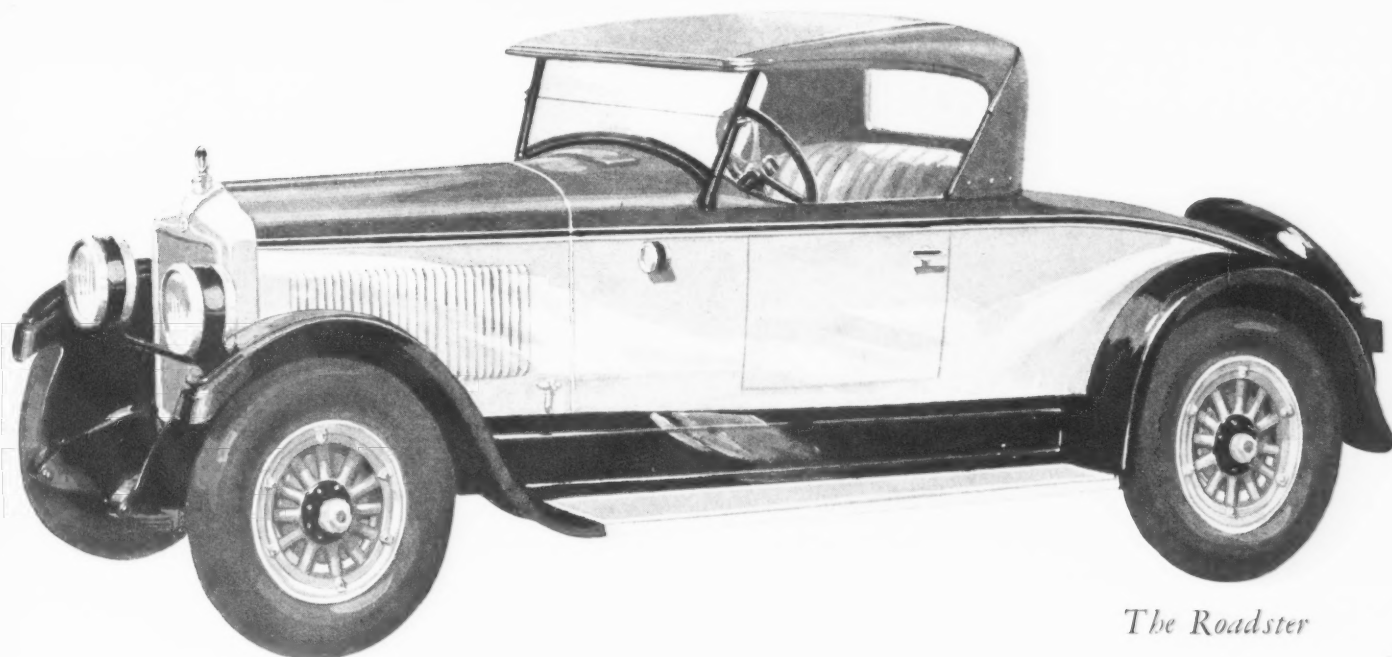
The "6-60" also includes slender, safety-vision windshield posts, a patented new construction. They reduce the "blind spot" 47 per cent. And cut the possibility of accident by one-half.



The Coupe



MOON 6-60



The Roadster

Greater Ease for Rider and Driver

Both men and women demand greater ease and comfort, so that they can ride and drive with peace of mind and body.

The "6-60" has an extremely low center of gravity, yet full road clearance. The car is only 70" high. A six-footer can look over the top—also sit in the car and drive with plenty of room.

The car is not only cradled low but sprung within and without for restful riding. Imagine

springs nearly as long (within 19½") as the entire frame!

Every unit that is subject to wear or strain carries an extra margin of strength and safety. On this point, don't overlook the battleship frame of the chassis, its 6" deep channel, its 7 cross members.



Parked in 14 foot space



The New Jubilee

You Can Sell the Whole Family

The "6-60" is of such charm, such quality, so attractively priced, so deliberately designed to meet the new traffic needs, that it is bound to draw a high volume of that tremendous class that is climbing up to better things.

It is also going to attract thousands of the more well-to-do who heretofore believed that no car could satisfy them unless it cost over \$1,500. The standard brougham, roadster and phaeton list at \$995. With the low price and high quality of the "6-60," you can sell two or three cars to a family.

Nowadays every member of the family has something to say about the choice of a car. You can sell the father on Moon's businesslike economy—first cost and last—on its high re-sale value. You can sell his collegiate son on its speed, its sporting style, its newer engineering design. And you can sell mother and daughter on its distinctive aristocratic looks, its restful riding and easy driving features.

Through its strong banking position, its universal credit, Moon has evolved a financial plan whereby your customer can budget his Moon purchase on

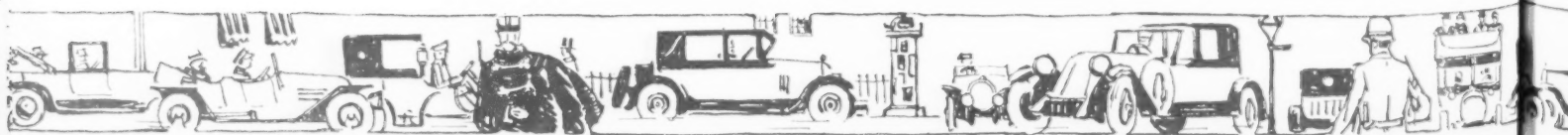
almost as cheap a monthly basis as cars of much lower price.

Our most experienced Moon distributors, who have seen this car and visualized its possibilities, say that they will at least treble their volume with the Moon "6-60." They say that it has the greatest selling appeal of anything within its price range in the last decade.

Heretofore Moon and Diana cars have been distributed mostly in the larger cities. The expansion of the Moon policy and the tremendous increases in production will mean a redistribution of some of the territories. There will also be a number of new openings for a direct dealer franchise.

The Moon "6-60" will be unveiled at the nearest Moon distributor's or dealer's showroom on August 5th. When you see the car and know what it really is, you will realize why it is going to be one of the best sellers of the 1927 season.

With the complete new Moon-Diana line, we believe we have a proposition that will give you a brighter vision of the automobile business than you have ever known in your career.



MOON 6-60

The Asset of Twenty Years' Stability

Twenty years of successful business is an enviable asset for any manufacturer; but it's pretty nearly the acid test for soundness in the automobile industry.

This industry is little over 25 years old—yet this period has seen some 600 automobile manufacturers come and go. There are only a few cars left that are as old or older than Moon. You can almost count them on your fingers. Moon has lived and progressed each year by giving the service the public wanted—and giving it in good measure of value. In the last six years, Moon has made unexampled strides. It has increased 603 per cent and, during that period, the public have expressed their preference for Moon and Diana cars with \$81,774,136.01 in cold cash.

No company in the industry has a more stable financial position. It is free from any burdens of mortgage, bonds or preferred stock. It has never undergone a financial reorganization. It has a record of 40 consecutive dividends.

The company has the reputation for sound management and very low over-

head. It is closely affiliated with a \$75,000,000 combination of the leaders in the automotive industry.

Every unit that goes into Moon construction represents the highest specialist resources of its day. For instance, the special Moon motor is the latest development by Continental Motors Corporation. It is made especially for Moon. Only an exclusive \$35,000,000 institution like Continental could produce this completely new and highly efficient design of motor for anywhere near the price.

Without this background Moon never could have offered the Moon "6-60" to the public under \$1,000.

In the Moon "6-60" you've got something to sell that the people have eagerly wanted for years; you have an advantageous financial contract that permits you to sell it profitably—on a basis that ties up a minimum of your capital.

Moon's success of twenty years, its remarkable rise to leadership in the past six years, are the strongest guarantees that dealers can have for a permanent, profitable, pleasant business in the future.



Jubilee 6-60 Features

*Try to get them all in any
other car at this price*

European type, small bore, long stroke Moon-Continental motor, $2\frac{7}{8}$ " x $4\frac{3}{4}$ ", developing 47.5 brake horsepower at 2,600 r.p.m.

Speed 60 miles an hour, accelerating from 5 to 25 miles in $7\frac{3}{4}$ seconds.

Economy-tested to 22 miles per gallon of gasoline; 600 to 800 miles on a gallon of oil.

"Battleship" frame braced by 7 cross members.

Spark full automatic.

Steers without effort, easily handled, easily parked; patented steering gear self-centers front wheels.

Four-wheel hydraulic brakes, the only kind that stay equalized and practically prevent skidding

Extremely low, yet plenty of road clearance. Low-hung engine gives practically straight-line drive.

Compact yet generously roomy, with rear seats 48" wide.

Springs are within $19\frac{1}{2}$ " of entire wheelbase length.

Narrow safety-vision windshield posts reduce "blind spot" 47 per cent and minimize possibility of collision.

Automatic windshield wiper.

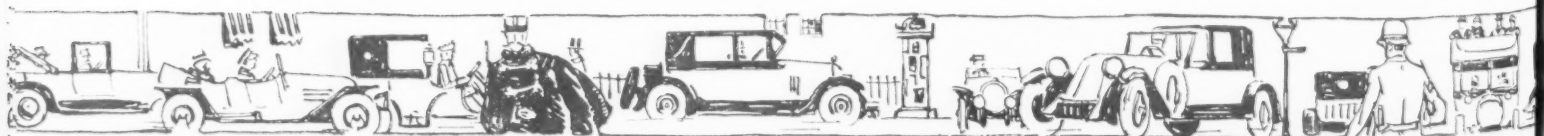
Original and distinctive radiator.

New body designs in attractive two-tone lacquer. Enclosed cars upholstered in Mo-Tex, a special new automobile fabric. Roadster in genuine leather.

In addition to the cars illustrated the "6-60" line includes a five-passenger phaeton and de luxe models in the roadster and brougham types.

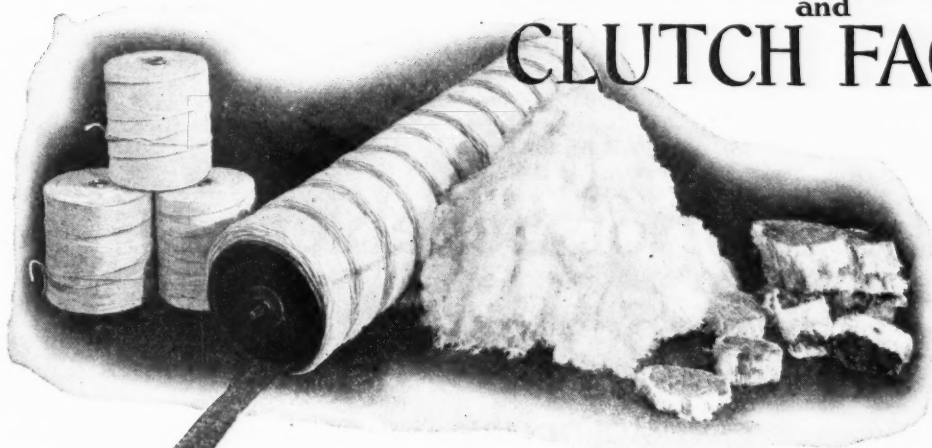
All cars have wood wheels and 29 x 4.75 tires, except the de luxe models, which have disc wheels and 29 x 4.95 tires.

MOON MOTOR CAR COMPANY, ST. LOUIS, U. S. A.



Announcing Grey-lock

an entirely new and different kind of
BRAKE LINING
 and
CLUTCH FACINGS



The brake lining testing machine and a corner of the laboratories in which Grey-lock was perfected.

IT will be in the hands of our dealers about September 1st.

Grey-lock, made in the largest and best-equipped asbestos textile mill in America, is not "just another brake lining." It is absolutely in a class by itself. It has taken years to perfect it, but now that we are about ready to put it on the market, you can rest assured that it is as nearly perfect as resources and skill can make it.

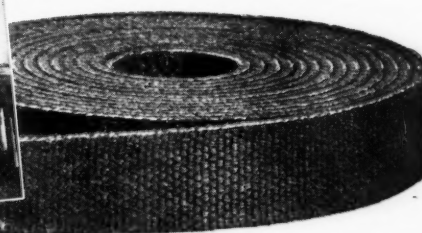
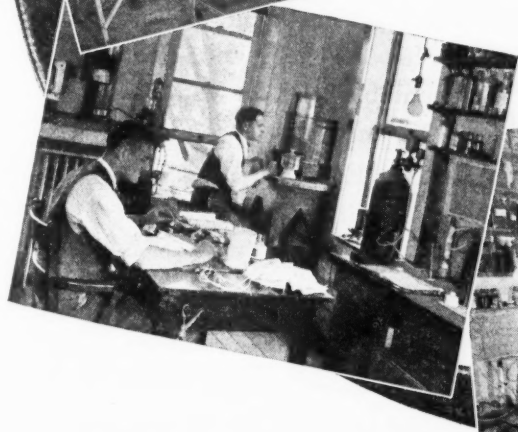
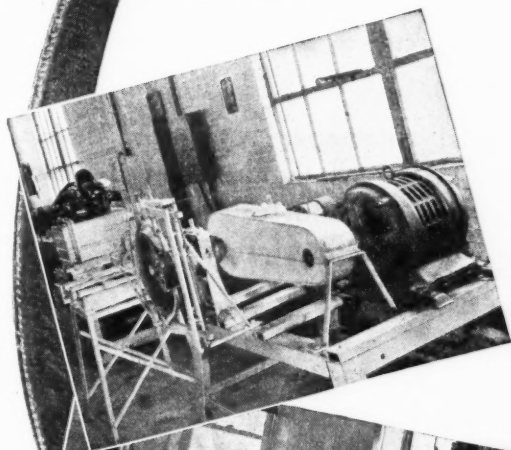
It has been amply tested under every conceivable working condition in actual use on pleasure cars, busses and trucks.

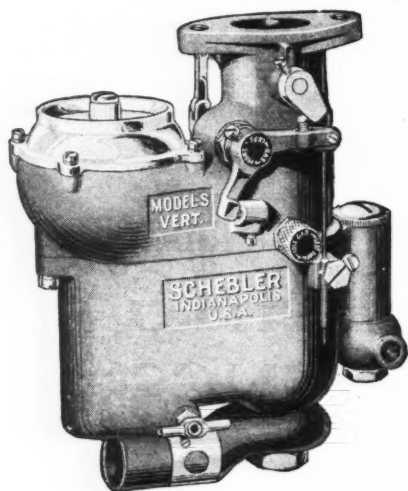
Every one who has tried it, without exception, has pronounced it the most wonderful material they have ever encountered for stopping a car.

We have prepared a folder describing in detail the many advantages of Grey-lock, which we will send promptly at your request.

Some sales territories are still open.

United States Asbestos Company
 Manheim, Pa.





the *Test* of Schebler Carburetors is—*A Trial*

EXTRAORDINARY performance results have sold the Schebler Model "S" Carburetor to the automotive industry—sold it for standard equipment and for replacement to improve car performance.

Marmon uses it—Duesenberg uses it—Reo, Chandler, Auburn, Kissel, Cleveland, Wills Ste. Claire, and nearly a dozen others of the best known cars in America, use the Schebler Model "S" Carburetor to get *exact* carburetion—and the best performance.

Three thousand good automotive equipment dealers throughout the United States sell thousands of Schebler Model "S" Carburetors every month to give car owners *exact* carburetion—and the best car performance.

And *all* these sales have been built upon a trial of the carburetor. The self-evident results create a demand. The right to sell this superior carburetor is very valuable to good automotive equipment dealers. Your territory may be open. Write us today and arrange for one trial sale on our thirty-day guarantee. It will build profitable sales for you.

A Test Proves It

No other argument for Schebler Carburetors means so much as the fact that hundreds of dealers throughout the United States have built big sales upon one single guaranteed installation. Try it yourself, and see.

WHEELER-SCHEBLER CARBURETOR COMPANY
INDIANAPOLIS

1926 : Schebler's Silver Jubilee Year : Established 1901

SCHEBLER
"REG. U. S. PAT. OFF."
The World's Finest **CARBURETORS**

ELCAR dealers sell the full pleasure of car-ownership to their prospects ~ ~ ~ ~

TO KNOW no engine trouble; to be delayed by no mechanical difficulties; to be able to weave in and out of traffic; to be across the street before the pack has fairly started at the signal's turn; to know that all this is combined with comfort to the rider, and beauty for the eye, and with economy of operation and upkeep—

—that is to know the full pleasure of car ownership.

And it is just this experience in car ownership that Elcar dealers are selling with such success and profit.

Their success is being accelerated by the many Elcar owners whose automobiles have attracted the serious attention of the community because of their graceful, pleasing lines; their comfortable riding qualities; their economy of operation and their powerful, flexible, smooth running Lycoming engines.

LYCOMING MANUFACTURING COMPANY

Makers of Fine Fours, Sixes and Eights-in-Line

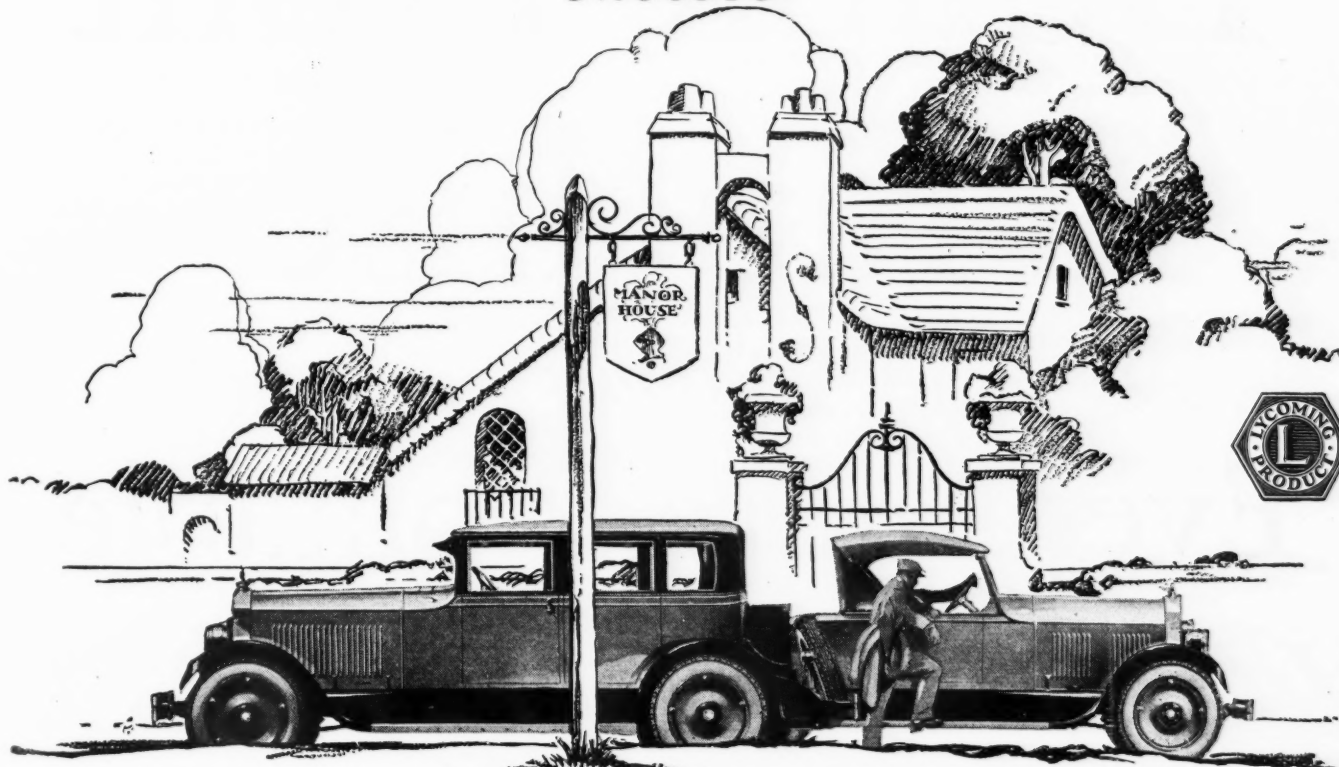
WILLIAMSPORT :: PENNSYLVANIA

Export Department—44 Whitehall Street, New York City

Member of Motor Truck Industries, Inc. of America

LYCOMING

Motors



ELCAR



A WELL BUILT CAR



With the Announcement of
The Greater
OAKLAND SIX
the
Double-Profit
Franchise
Becomes
Even More Profitable
Than Ever Before





The Greater OAKLAND SIX

WINNING AND HOLDING GOOD WILL

TWELVE months ago we undertook the expansion of our dealer organization.

To dealers we offered a quality product and an agreement whose liberal discounts, unusual and intensive merchandising co-operation and provisions for an equitable, satisfactory business relationship, attracted widespread interest and won hundreds of sound business men to the Oakland banner.

With the advent of the Pontiac Six, the Oakland-Pontiac Double-Profit Franchise assumed such attractiveness that it became one of the most eagerly sought for in the entire industry.

Over 1800 new dealers have signed for this franchise since August, 1925—because they saw in it one of the most valuable and profitable business opportunities the automobile industry afforded.

Their unvarying success is indisputable proof that they were right—and that they struck while the iron was hot! In city after city and county after county, Oakland-Pontiac dealers are ranking among the leaders in registrations—surpassing longer established dealers handling deservedly popular cars.

Now, with the advent of the Greater

Oakland Six, holders of the Double-Profit Franchise are destined to enjoy even greater success and more marked sales leadership in their communities.

Featuring new Fisher bodies in new and striking two-tone Duco color combinations and many other vital refinements, including the Rubber-Silenced Chassis, the Greater Oakland Six actually and literally sets a new measure of six-cylinder value.

Only Oakland-Pontiac dealers enjoy the limitless sales producing possibilities of the Rubber-Silenced Chassis, with its almost inconceivable smoothness and quietness of car operation.

Only Oakland-Pontiac dealers can offer this latest triumph of Oakland advanced engineering—can use it to attract prospects to a complete line of quality sixes comprising eight body types, at a price range from \$825 to \$1295.

You have been watching the spectacular success of Oakland-Pontiac. Surely you have sensed the advantages offered in the Double-Profit Franchise. Our records show that the more desirable territories are being closed rapidly. This is the time for you to get all the facts from a factory representative. Wire our department C to have him call.

OAKLAND MOTOR CAR COMPANY, PONTIAC, MICHIGAN

PONTIAC SIX

CHIEF OF THE SIXES



Curtis Originates Design— Does Not Imitate

The designers of Curtis Equipment are the executives responsible for production in our own plant. They have a first-hand understanding of the problems involved.

Constant attention to improvement of the product has wrought wonders during the 72 years' history of this company. Of this period 30 years have been devoted to pneumatic engineering, some of the best talent in the industry being employed on Curtis work.

When there is a job for air to do, Curtis engineers solve the problem in their own way.

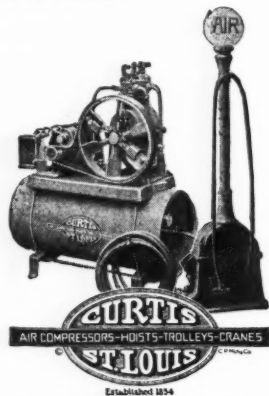
Generally it proves to be a different and a better way. The result is that Curtis originates; does not copy. The leaders in the manufacture of high-grade small compressors accept the responsibility also of leadership in the design, engineering and application of air machinery to the work of the industrial world.

When you buy a Curtis compressor, hoist or crane, do not do so because the price is lower than competition, but because it is a better piece of pneumatic machinery.



The Curtis Centrifugal Unloader, for Instance

Silent! Positive! Unfailing! Completely prevents all strain in starting, upon both compressor and motor. Eliminates the use of intermediate air chambers, oil spitting tubes, waste of air, etc. Avoids valve complications; simplifies the electrical starting switch down to a thoroughly reliable mechanism.



1854—Seventy-Two Years—1926

CURTIS Pneumatic Machinery Co.
1957 Kienlen Ave., ST. LOUIS, MO.
518 U Hudson Terminal, N. Y. C.

Please send me full information about Curtis Air Compressors.

Name City

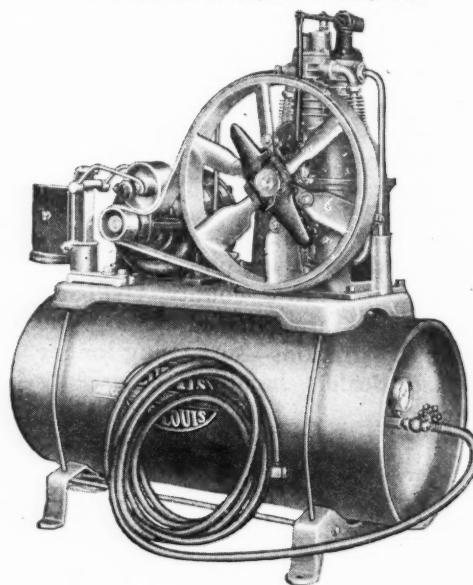
Address State



Every Curtis is Factory Tested

When you buy an untested compressor it *may* work all right. You *may* not be buying any grief. But when you select a Curtis factory-tested compressor it *will* be satisfactory, for it has been operated under actual service conditions, adjusted and put into the finest running condition to insure you freedom from trouble.

Curtis Pneumatic Machinery Co.
1957 Kienlen Ave., St. Louis, Mo.



CURTIS

COMPRESSORS-HOISTS-CRANES
AND AIRMIST CAR WASH SYSTEM

Trust the choice of leading automobile manufacturers—specify Permites for replacements!



**We will be glad to consider distributors' applications for open territory.*

WHEN an automobile manufacturer selects a piston as standard factory equipment, it has to convince automobile experts, by test, that it's better than any others. Makers of nearly 1,000,000 cars a year have adopted Permites as standard factory equipment. It's a pretty good hunch for you to specify Permites for your replacement work.

Permites are exact factory duplicates. With only twenty-two Permitte types, you can take care of practically every replacement job you get.

Permites are always uniform, because they're cast over permanent steel molds *in our own foundries*—a feature exclusive to Permites.

The Permitte aluminum alloy is acclaimed by experts as the finest piston metal ever perfected. It's light-weight. Strong. Long-wearing. Its heat-dispelling properties are five times as great as cast iron. It keeps motors cool, smooth-running.

Order a small stock of Permites from your distributor! You only need 22 types to serve 80% of the demand. See your distributor, or write—

*PERMITE PISTON CO.

Cincinnati, Ohio

PERMITE PISTONS

PERMITE PISTONS ARE EXACT FACTORY DUPLICATES



Valve Sales

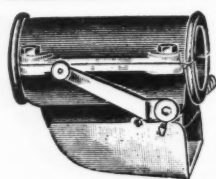
VALVE SALES pay better dividends on your time than valve grinding. Replacing a whole set of worn-out valves pays better than replacing one or two and leaving the rest to make trouble for you and the owner.

Thompson Valves give you bigger profits and the owner better satisfaction.

THOMPSON PRODUCTS, INCORPORATED
General Offices: Cleveland, Ohio, U. S. A. Factories: CLEVELAND and DETROIT



Thompson Valves



Specially for Chevrolet Owners

At \$4.00, it earns its cost many times over. Like other Cooper products, it is a real trouble preventer.

Cooper Senior Dash Control

A handy, handsome control for Cooper cut-out, choke, radiator shutter, heater valve, etc. Twist of wrist locks it in any position. Price \$2.50.



The Greatest Friend a Motor Ever Had

The Cooper special cut-out is a scientifically designed engine tester that warns of motor trouble, faulty ignition or poor compression. It is the watchdog of the engine—a time, trouble and money saver.

When a Ford owner—or any other car owner—comes into your place of business—GRAB HIM. He's a live, willing prospect for the Cooper. No man living wants to pay unnecessary repair bills. No one wants motor trouble on a lonesome country road at 3 a. m. Any careful motorist will gladly pay a few dollars for engine protection. Show him why he needs the Cooper and HE WILL BUY. Reasonably priced at \$2.50 for Fords. Larger cars up to \$5.00. See your jobber—or write direct for information and discounts.

COOPER MANUFACTURING COMPANY

451 South First Avenue Marshalltown, Iowa

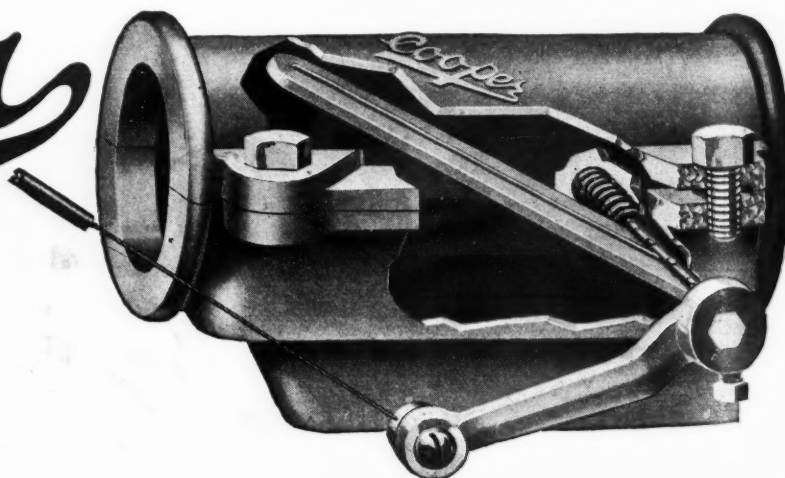
Exclusive Sales Representatives
THE FULTON COMPANY, Milwaukee, Wis.

Ten Sales Boosters

1. A scientifically designed engine tester.
2. Blows out loosened carbon.
3. Easily installed without severing or weakening exhaust pipe.
4. Ruggedly made with extra heavy flapper and spring.
5. Chatterproof, silent when closed.
6. Increases power of motor.
7. Saves gasoline.
8. Self cleaning. Mud, water and dust proof.
9. Relieves back pressure on motor.
10. A combination muffler cut-out, engine tester and carbon outlet valve combined.

The
Cooper
CUT-OUT

**Engine Tester
and Carbon
Outlet Valve**



**Display
Stand
FREE**



To Make the Passer-BUY

Ford Owners Need the Cooper Dash Gasoline Gauge

And here's a real salesman that puts it across for you. Set this unique display in your window—stand it on your counter—watch your customers toy with it. They'll sell themselves a Cooper Dash Gasoline Gauge without your saying a word.

This ingenious display stand shows how simple—how trouble-proof the gauge is. Nothing to go wrong in a lifetime of service. The low price is a real inducement to buy and it leaves a nice edge of profit for you. Easy to install. Get the details of this last addition to the fast-selling Cooper line. Reasonably priced to sell at \$3.00.

See your jobber for complete information or write us direct.

COOPER MANUFACTURING COMPANY

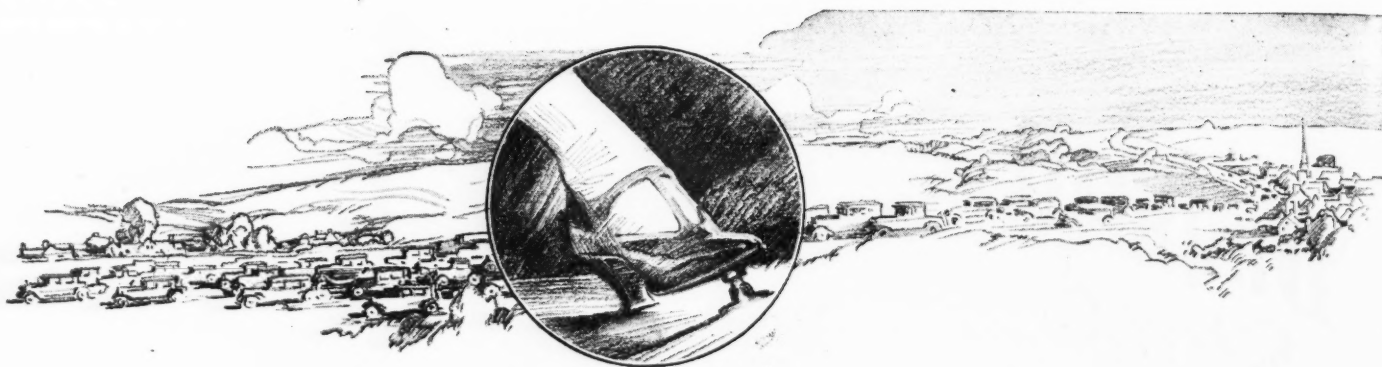
451 South First Ave.

Marshalltown, Iowa

Exclusive Sales Representatives

THE FULTON COMPANY, Milwaukee, Wisconsin

Cooper



Who abolished cranking?

PRODUCTS OF GENERAL MOTORS
*"A car for every purse
 and purpose"*

CHEVROLET
 PONTIAC
 OLDSMOBILE
 OAKLAND
 BUICK
 CADILLAC
 GMC TRUCKS
 YELLOW CABS,
 BUSES AND TRUCKS

Fisher Bodies • Delco and Remy
 Electrical Equipment • Harrison
 Radiators • Jacox Steering Gears
 AC Spark Plugs—AC Speedome-
 ters • New Departure Ball Bearings
 Jaxon Rims • Brown-Lipe-Chapin
 Differentials and Bevel Drive Gears
 Hyatt Roller Bearings • Inland
 Steering Wheels • Klaxon Horns

Delco-Light Electric Plants
 Frigidaire Electric Refrigerators

General Motors cars and trucks,
 Delco-Light electric plants and
 Frigidaire electric refrigerators
 may be purchased on the GMAC
 Time Payment Plan.

The closed cars have Fisher
 Bodies, also a "Product of General
 Motors."

THE MISERY of cranking was abolished when the Delco self-starting and lighting system was invented in Dayton, Ohio, in 1910.

A new era opened for the automobile! Women could drive without fatigue; night driving was made safe, and *all* driving more enjoyable.

The Delco self-starting system was first used by Cadillac, a General Motors car.

The inventor is today at the head of the Research Section of General Motors, which is responsible for the largest automotive laboratories in the world.

You have a right to know,

when you buy a car, that it embodies all that is best and soundest in scientific progress. The General Motors Laboratories and Proving Ground are your guarantee that the same sort of brains which produced the self-starter has planned and tested General Motors cars.

© G. M. C., 1926

GENERAL



MOTORS



And it's a REAL MIRROR

"A PIPPIN! I bought it at Smith's—something new—not just painted glass or colored glass—gives a beautiful deep reflection—and so easy on the eyes."

It's Glareproof. The genuine glare-eliminating mirror, just as efficient for sun glare, as it is for snow glare and dazzling headlights.

Glareproof is a LIBERTY product. It took 31 years to perfect it, but it was time well spent. Your Jobber can supply you.

Liberty Mirror Works
PITTSBURGH

Glareproof reflects
all objects in natu-
ral colors.



Glareproof
AUTO MIRROR



Every Stroke Pays a Profit

With This New Larkin-Thuro
Lubricator

Semi-Automatic-Super High Pressure

—and it has a Flexible, All-Steel, Ball-Jointed Hose that will turn in any direction to reach hard-to-get-at, out-of-the-way fittings.

THIS Compressor is just another indication of Larkin-Thuro progressiveness. Not very big to look at but is mighty efficient—capable of developing 7500 lbs. pressure when needed—and is surprisingly simple and easy to operate. Feeds the lubricant to head of compressor automatically—no screw action necessary. Immensely popular where speedy service is desired. Helps to make the lubricating business quick, clean and highly profitable. Easy to fill and positive in operation. And the all-steel, ball-jointed hose is just another Larkin-Thuro step toward greater efficiency. Surprisingly flexible—almost capable of tying in a knot—and yet is practically unbreakable. It's a combination you can't beat.

Made in two sizes

A-25—1 $\frac{1}{4}$ lbs. Capacity

A-50—2 $\frac{1}{4}$ lbs. Capacity



—and Here's Another Profit Maker

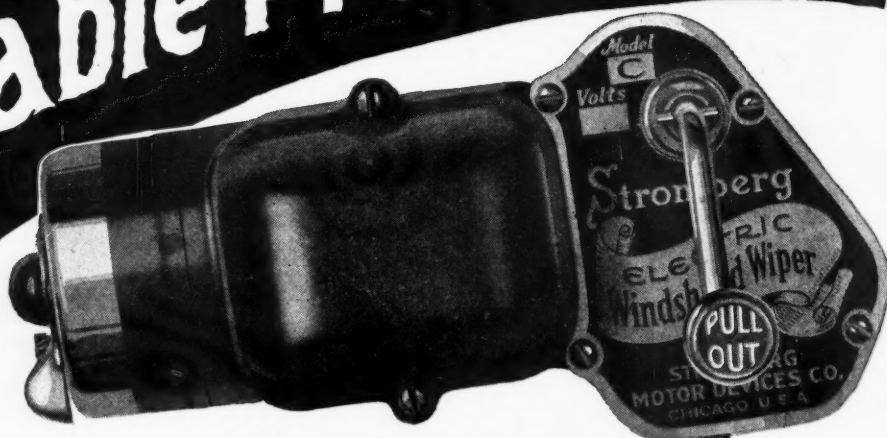
Preventing friction is a matter of putting slipperiness between moving parts. Larkin-Thuro Lubricant is a specially prepared product of solidified oil—not merely a grease—and therefore supplies that needed element of viscosity which is the slipperiness so essential to the elimination of friction. Furnished in one and five pound cans and 100 lb., 250 lb. and 400 lb. Drums.

If you want to be able to pick your share of the profits out of the squeaks that come your way, ask your Jobber to tell you the story of these and other Larkin-Thuro Products.

The Larkin Automotive Parts Co.
Dayton, Ohio

Larkin-Thuro Lubrication keeps the up keep down

Two Speeds Adjustable Pressure



STROMBERG ELECTRIC WINDSHIELD WIPER DOES MORE—DOES IT BETTER

Price
\$9.00

Does it all the time—goes as long as the current is on, fast or slow as the driver prefers or conditions demand. Uses but little current and has an adjustable pressure against the glass.

These are just a few of the high spots that make the Stromberg Electric Windshield Wiper the most popular device of its kind on the market; that give it the

most and best selling points; that make customers prefer it to all others.

Safety and comfort demand the Stromberg. Just showing and mentioning its salient features sell it. Why not cash in on our national advertising in the Saturday Evening Post and other magazines? Write now for full particulars and our sales helps on the full line of Popular

STROMBERG AUTOMOBILE NECESSITIES



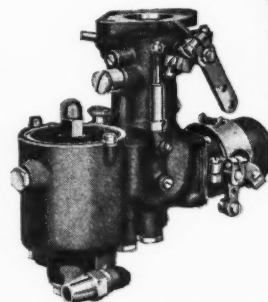
Stromberg Super Shock Absorbers

Give greatest comfort because they regulate spring action to the correct degree. For balloon or Standard Tires. Working parts protected against dirt, water and oil. Steel cable will not rust, stretch or break. No adjustment—no oiling or greasing. Made to measure for each make of car. Your trade will want them once they know them.

Don't fail to get your share of the profits on these popular auto necessities.

Stromberg Special Carburetors

The only carburetors built special for each model of engine. Give that complete satisfaction desired by all car drivers. Maximum power—quickest pick-up—smoother running at all speeds—greatest economy. For best results recommend and sell Strombergs.



STROMBERG MOTOR DEVICES CO., 58-68 East 25th St., CHICAGO

Direct Factory Branches: 517 W. 57th St., New York City, N. Y.; 760 Commonwealth Ave., Boston, Mass.; 84-86 Hancock Ave. W., Detroit, Mich.; 1609 Hennepin Ave., Minneapolis, Minn.; 1809 McGee St., Kansas City, Mo.

B-30

This dealer orders Prest-O-Lite Batteries in carload lots



Prest-O-Lite

HERE is a letter from The Pickett Storage Battery Company, of Greensboro, N. C., which is proof positive that Prest-O-Lite Battery dealers are making more money:

"Six years ago we opened up a small battery station and decided to handle Prest-O-Lite.

"Today we are one of the few concerns in this section catering only to the battery business. Our station has been enlarged

several times. We are now working seven men and our charging lines have been increased so we can now take

care of over a hundred batteries a day.

"A few days ago we ordered a solid carload of Prest-O-Lite Batteries—the second one this year.

"We think there is no line of storage batteries equal to Prest-O-Lite. You consider things from the service station's angle as well as from the manufacturer's viewpoint. Prest-O-Lite has always more than met competition."

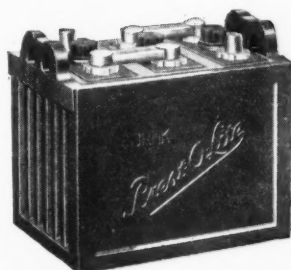
What more need be said! Write for our interesting plan and service station proposition.

THE PREST-O-LITE CO., INC.
INDIANAPOLIS, IND.

New York

San Francisco

In Canada: Prest-O-Lite Company of Canada, Ltd., Toronto, Ontario





Gaining Public Confidence

The New Star Six

| | |
|----------------------------------|-------|
| Chassis | \$650 |
| Touring | 725 |
| Coupe | 820 |
| Coach | 880 |
| De Luxe Sport Roadster | 910 |
| Sedan | 975 |
| Landau | 995 |
| COMPOUND FLEETRUCK | |
| Ton Chassis | 975 |

Improved Star Four

| | |
|--------------------------------|-------|
| Com. Chassis | \$470 |
| Convertible Roadster | 550 |
| Touring | 550 |
| Coupe | 675 |
| Coach | 695 |
| Sedan | 795 |

Prices f. o. b. Lansing

HAYES-HUNT BODIES

DURANT MOTORS, INC., 250
West 57th Street, New York City
General Sales Department,
1819 Broadway, New York City

Plants:

Elizabeth, N. J. Lansing, Mich.
Oakland, Cal. Toronto, Ont.

Dealers and Service Stations
throughout the United States,
Canada and Mexico

Low-cost Transportation

Star Cars



TRUE merit is recognized in this land of ours. Sometimes, the path is not always easy. Sometimes it is not always swift. Sometimes patience is required. But if the cause is just, if real service is being rendered to the public, then sooner or later the multitude will appreciate it and will praise the efforts. Q It is a law of nature. Q Star cars are now in their fourth year. More than four hundred thousand have been built. Progress has been constantly made in production. The demand has been widened. Star car following has steadily increased. Q Today the name STAR on a motor car has the respect of the trade and the confidence of the public. Q And this confidence has been earned by sheer merit. It has been earned by building honestly and giving dollar-for-dollar value—by serving the public need. Q Today the New Star Six and Improved Star Four, more than ever before live up to these details. Q Go see the new Star cars and you will appreciate what has been done. Q You will see car beauty which will win your hearty approval. You will find a chassis of greater power and a body obviously superior in design, construction, equipment, and finish. Q An inspection of the new models will enable you to realize why the Star car is Gaining Public Confidence — why Star car sales are steadily climbing — and why the true merit of Star cars is being appreciated more and more in a country where the buyer of automobiles knows what constitutes dollar-for-dollar value.





A "C-M" Cost Cutting Idea for Service Stations and Garages

Two "Cyclone" Hoists connected to "Matchless" Trolleys operate on a continuous oval shaped Monorail Track in the service station illustrated in the view above.

Automobiles to be serviced or repaired are placed under the oval shaped track. If it is necessary to raise an entire car clear of the floor, one "Cyclone" Hoist is used on the front end and the other on the rear end. If only one end must be raised either one or both hoists are employed as needed.

The "C-M" Equipment in this shop speeds up service and repair work with a consequent lowering of labor costs. The ease and safety with which heavy cars are handled afford working conditions impossible to picture. And the space saving advantages are vital factors to consider. Regardless of the size of your service station or garage, a combination of "Cyclone" Hoists and "Matchless" Trolleys can be arranged to meet your conditions.

The exceptional features of construction of these master material handlers merit your serious consideration.

Ask the "C-M" branch or Distributor in your territory to give you complete information. Or write us here in Cleveland.

The Chisholm-Moore Mfg. Co., Cleveland, Ohio

Branches: New York—Chicago—Pittsburgh

Agencies in All Principal Territories for Prompt Service

CHISHOLM-MOORE

OVERHEAD  TRACK SYSTEMS

At last!



A Drill that stays on the job under continued grueling punishment

Patented December 8, 1925.
Others pending.

And is made in a complete range of SIX Sizes . . . to meet every garage purpose.

This isn't "just another electric drill." It has features you won't find on any other.

For example: *Patented self-oiling armature bearings.* Long special high speed bearings in perfect alignment. Wick lubrication from a sealed oil chamber that will keep the bearings perfectly lubricated over long periods. No balls to break; no retainers to fail.

Unusual ventilating capacity. A very efficient fan design provides ample air flow to keep the drill comfortably and safely cool even after severe sustained performance. Inlet holes so located that dirt is least liable to be drawn into the the motor.

Self tightening chuck except on the largest size. While gear operated, the key need be used only under extraordinary circumstances. On the ordinary run of work the chuck is easily operated by hand, and tremendous gripping power obtained. Chuck spindle mounted on ball thrust bearing.

Spirit level in top of frame. The $\frac{3}{8}$ inch and $\frac{1}{2}$ inch Light Duty Drills are equipped with a carefully guarded level set into the top of the frame.

The Goodell-Pratt Drill is made by precision Toolsmiths, and is more nearly trouble-proof than any of a score we have tested impartially beside it. Difficult to overheat, standing up easily under the hardest and roughest kind of punishment, a glutton for overloads—here at last is a drill that doesn't "lie down on the job." It seldom needs repairs or adjustments, but when it does, every part is easily accessible. The head is removed, and the brushes and commutator reached, by simply removing two screws.

Screws used in assembly are standard. You can get them easily, anywhere. Its long life, marvelous capacity and remarkable freedom from need of repair and adjustment, make this the most economical drill you can buy.

Write for complete details and prices—and for help with any electric drill problem you may have. Address our Mr. K. Y. Taylor.

Specifications of No. 1044 Drill $\frac{1}{2}$ Inch Light Duty

Aluminum Case, finished inside and out. Ample ventilated for cooling. Level set in top of case.

Switch in Handle, easily controlled by thumb without shifting either hand.

Wide-faced steel gears, with heat-treated, generated teeth. These gears run in bronze bearings and graphited grease.

Patented self-oiling motor bearings, requiring lubrication only at intervals. Sealed against leakage.

Gear-operated self tightening chuck that centers drills accurately up to $\frac{1}{2}$ inch capacity. *15 foot, rubber-covered cable*, locked to frame so it cannot possibly pull out.

Universal Motor for A. C., or D. C. 110 or 200 volt.

Also: $\frac{1}{2}$ " Standard, $\frac{3}{4}$ " Heavy Duty, $\frac{5}{8}$ " Heavy Duty, $\frac{1}{4}$ " Standard and $\frac{3}{8}$ " Heavy Duty.

GOODELL-PRATT COMPANY,

Toolsmiths

GREENFIELD, MASS., U.S.A.

GOODELL-PRATT

1500 GOOD TOOLS

PIERCE-ARROW TALKS YOUR LANGUAGE

It would be strange if it had escaped your notice.

Anyone at all observant of conditions can see it.

Money—a lot of it—is being made by those who are selling Pierce-Arrows today.

Money—a lot of it—is being paid in commissions to Pierce-Arrow distributors and dealers, because money—a lot of it—is being invested in Pierce-Arrows by people who never before felt justified in going beyond \$2500 as the price of a car.

The reason is not hard to find. It is due to the new Pierce-Arrow line of custom-built coaches—true Pierce-Arrow enclosed cars, now available

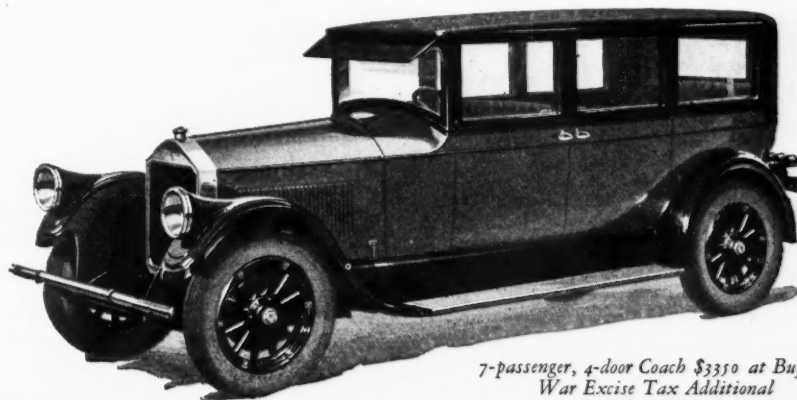
at prices so moderate as to make Pierce-Arrow a contender for consideration in practically every price class.

You are bound to feel the pull of this Pierce-Arrow custom-built coach attraction this year, no matter what car or cars you are handling. Why fight *against* it when you might just as easily have at least four fighting Pierce-Arrows—the *Series 80* custom-built models—waging battle *in your behalf*?

Let no preconceived notion as to the Pierce-Arrow situation in your locality keep you from communicating with us. Pierce-Arrow today talks your language. It's the language of profit — and convincingly plain.

THE PIERCE-ARROW MOTOR CAR COMPANY, Buffalo, N. Y.

[The Pierce-Arrow Finance Corporation offers dealers complete financing and insurance service on both new and used vehicles, at low rates]



7-passenger, 4-door Coach \$3350 at Buffalo
War Excise Tax Additional
—body by Pierce-Arrow

ALL CRESCENT TOOLS HAVE A "FAMILY RESEMBLANCE"



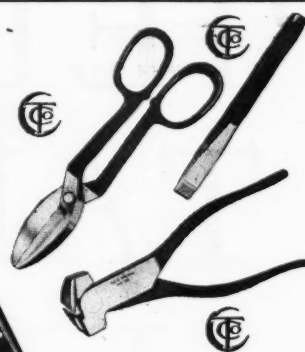
The "father" of the Crescent Tool family

BACK in the days when an automobile was still a "horseless carriage" the Crescent Wrench established the "family traits" which make Crescent Tools first choice among experienced mechanics.

Everyone knows what the Crescent Wrench will do when there are nuts or bolts to be tightened or adjusted. That is why "Made by the originators of the Crescent Wrench" is another way of saying "Here is a tool you can count on for correct design, lasting service, and thorough dependability."

The "family traits" of the Crescent Wrench are now found in a complete line of tools for mechanical and electrical work. The Crescent-Smith & Hemenway line includes cutting pliers, cold

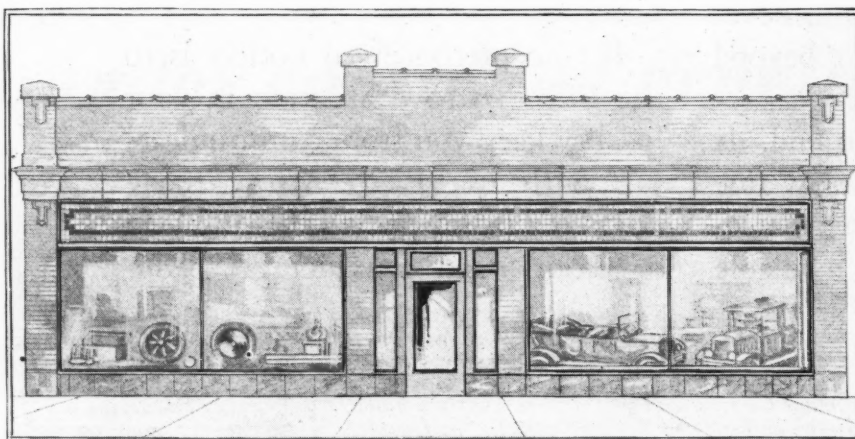
chisels, snips, hack saws, nippers, auger bits and similar tools for a wide variety of work. Get these tools from your regular jobber.



CRESCENT TOOL CO.
208 HARRISON ST.
JAMESTOWN, NEW YORK



CRESCENT-Smith & Hemenway *Mechanics' & Electricians Tools*



Make Your Display Windows Pay Your Rent

It can be done! It has been done scores of times. Successful dealers have told us that the profit from extra sales brought in by their Kawneer Solid Copper Store Fronts more than paid the rents on their show rooms. YOU can do the same in YOUR OWN BUSINESS.

Besides displaying your cars to the best possible advantage, thus bringing you added sales and profit, your Kawneer Front will reflect the character of your show rooms in a new and pleasing way. Your business will take on added prestige. You will be marked as a dealer who believes in quality first.

Kawneer SOLID COPPER STORE FRONTS

Free Book Shows How

We have prepared an interesting booklet showing designs of Kawneer Fronts which are pulling sales for automobile dealers everywhere. Some of these designs will build sales for YOU. A copy of this booklet will be sent you without obligation. Attach the coupon below to your letterhead and mail in today!

THE
KAWNEER
COMPANY

3924 Front Street NILES, MICHIGAN

Gentlemen:—Please send me a copy of your latest Book of Designs.

Name

Address

BUNTING

PHOSPHOR BRONZE

BUSHING BEARINGS

EASY TO REAM

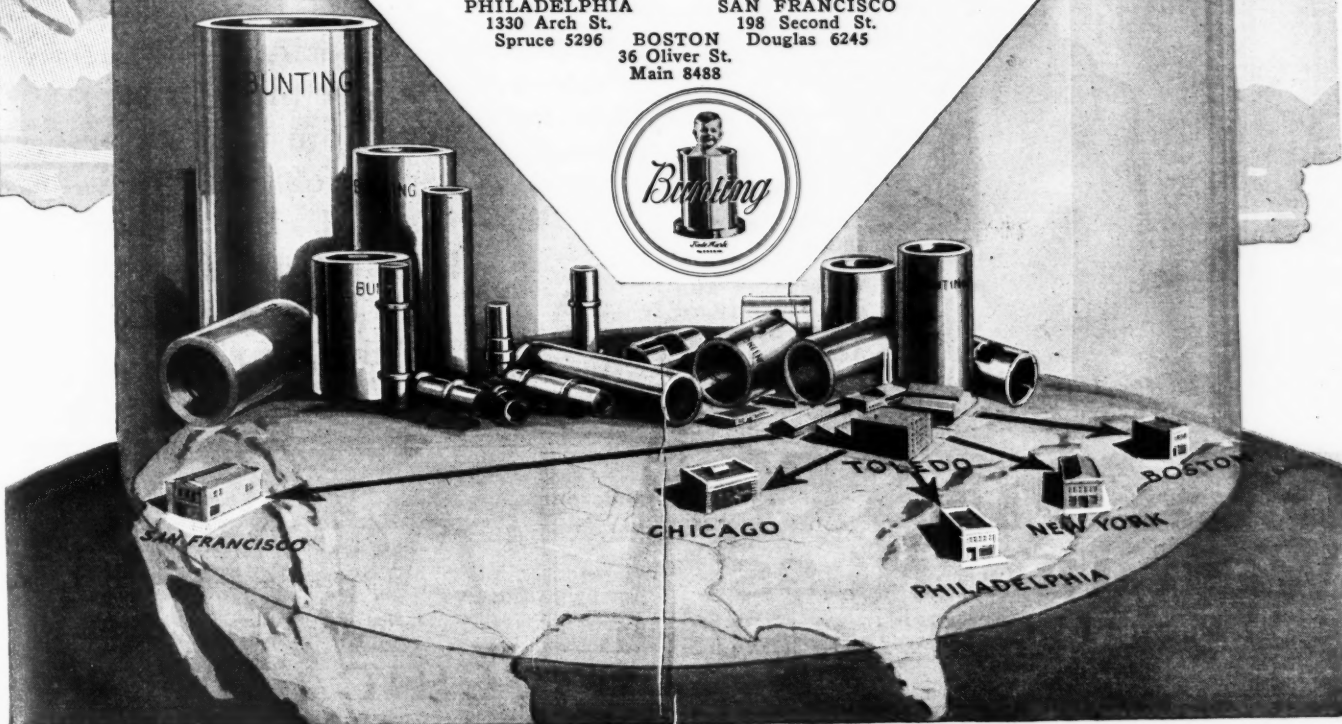
The time you save in installation alone makes Bunting Sand Cast Phosphor Bronze Bushing Bearings worth a determined effort to get them. The long life of satisfactory service they give the car owner justifies your labor and your profit. For piston pin, spring shackle, and steering assembly replacement in all popular automotive vehicles.

Leading jobbers everywhere have them. Bunting carries big stocks in six principal cities.

The Bunting Brass & Bronze Co.

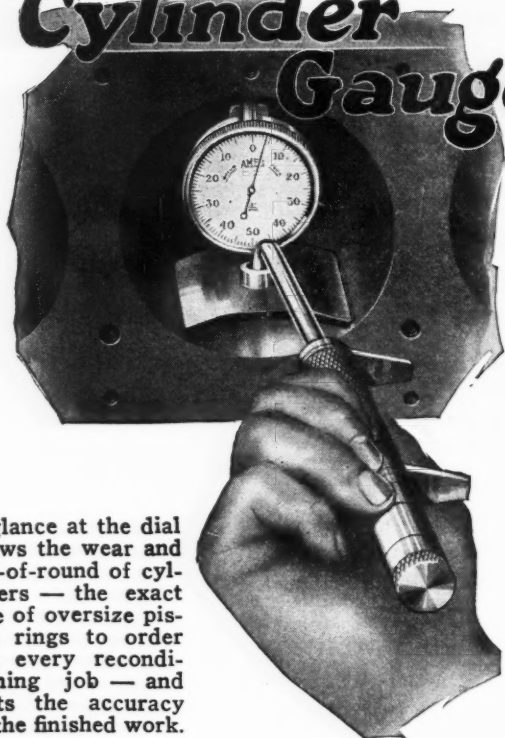
TOLEDO, OHIO

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| BRANCHES AND WAREHOUSE AT | |
| NEW YORK | CHICAGO |
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| Columbus 7528 | Calumet 6850-6851 |
| PHILADELPHIA | SAN FRANCISCO |
| 1330 Arch St. | 198 Second St. |
| Spruce 5296 | Douglas 6245 |
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AMES

Cylinder Gauge



A glance at the dial shows the wear and out-of-round of cylinders — the exact size of oversize piston rings to order for every reconditioning job — and tests the accuracy of the finished work.

And Crankshaft Gauge



Shows the wear and out-of-round of Crankshafts, Wristpins and other round Parts. Speedy — Accurate.

Buy from Your Jobber
or Send for Folders

B.C. AMES CO.

Waltham, Mass.

"Largest Makers Dial Gauges in the World"

Do you
ever
wipe off a
windshield —
?

There is perhaps no courtesy more appreciated by owners than that of polishing the windshield.

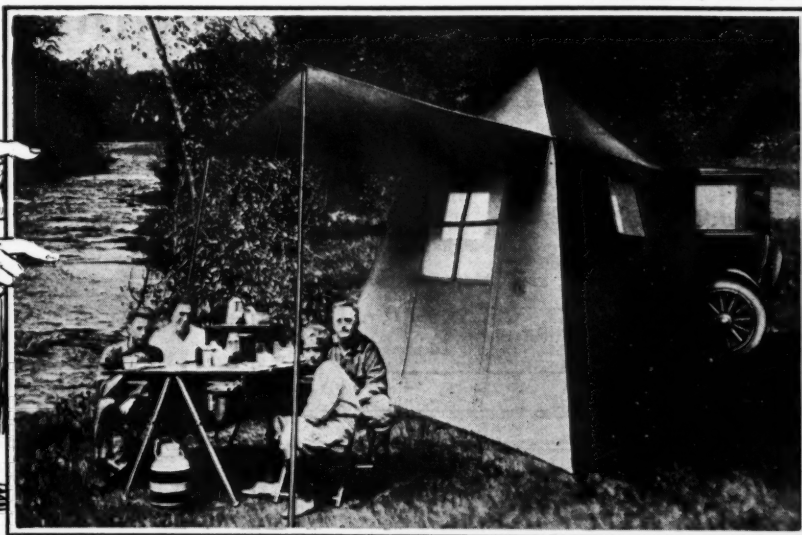
For the little time it takes, it brings in big returns.

If you never do it — try it. If you do it sometimes—do it all the time. Drivers seldom take their eyes off the windshield. It's a good place to advertise your service by making it shine.

MOTOR AGE

5 S. WABASH AVENUE
CHICAGO, ILL.

Photo taken by courtesy of Rush Outing Co.



"Sell the Ford Tourist a *Pioneer Engine Support*"

"If I was a Ford dealer, I'd go after every one o' these Ford tourists and sell them Pioneer Engine Supports. They're the fellows who need them.

"When you drive a Ford some 200 miles a day over all kinds o' roads, you begin to appreciate how easy it is to drive with that little steel saddle around your flywheel housing.

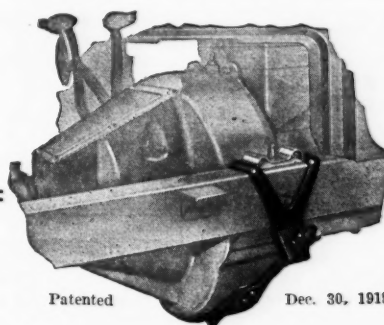
"There ain't a thing that wears out a Ford driver and his car more than vibration, bolts and rivets gittin' loose, crankcase arms breakin' maybe, and a whole flock o' trouble just due to poundin' along over rough an' rutty roads. The Pioneer reduces vibration to almost nothin'; so don't let any o' those Ford tourists start out without a Pioneer Engine Support. When they come back from their trips, they'll be your steady customers for life."

*If you are not on our dealer list
mail the coupon below for our
attractive proposition.*

The Brewer-Titchener Corporation
108 Port Watson St., Cortland, N. Y.

Pioneer
Engine Support

Trade Mark Reg. U. S. Pat. Office



Patented

Dec. 30, 1919

- tightens Ford Chassis
- eliminates Vibration
- prevents Broken Crankcase Arms
- sets Crankcase Arms already Broken
- cuts Repair Bills
- reduces Oil Leakage
- keeps Rivets and Bolts from Loosening
- gives Smoother Running Engine
- increases Riding Comfort

Only \$3⁰⁰



The Brewer-Titchener Corporation
108 Port Watson St.
Cortland, N. Y.

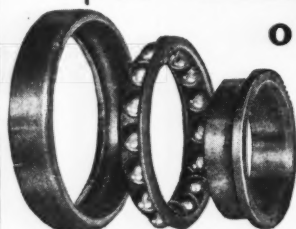
Please send me further information about the Pioneer Engine Support.

Firm Name

Individual

Address

A Complete Line of Bearings



Angular Contact Thrust Bearings, Angular Contact Radial Bearings, and Thrust Ball Bearings of all types, are available for you through our manufacture. And the assistance of our Engineering Department is an added advantage without extra cost to you. Send us your blueprints and inquiries.

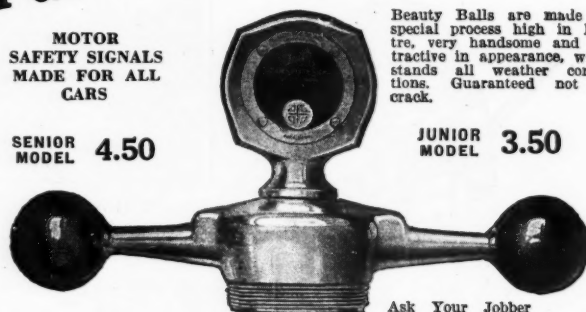
THE BEARINGS COMPANY OF AMERICA
LANCASTER, PENNA.
Western Sales Office—1012 Ford Bldg., Detroit, Michigan

Faith BEAUTY BALL LOCKING CAP FOR ALL MODEL CARS

MOTOR
SAFETY SIGNALS
MADE FOR ALL
CARS

SENIOR
MODEL 4.50

JUNIOR
MODEL 3.50



Beauty Balls are made by special process high in lustre, very handsome and attractive in appearance, withstands all weather conditions. Guaranteed not to crack.

Ask Your Jobber

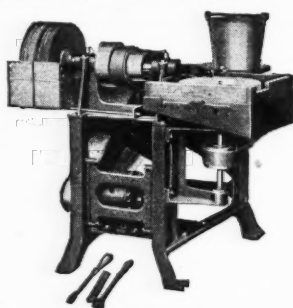
FAITH MFG. CO., 2539 N. Ashland Ave., Chicago, Ill.

FAST AUTO GLASS EDGING

GRINDS
SMOOTHS
AND
POLISHES
EDGES OF
AUTO GLASS

Write today—Dept. K
MAKE THESE EXTRA
PROFITS

HENRY G. LANGE MACHINE
WORKS
DEPENDABLE SINCE 1882



160 N. MAY ST.
CHICAGO

The most successful
merchandisers keep
at it every week . .

in

MOTOR AGE

Buy SMOOTH-KUT EXPANSION (TRADE NAME REGISTERED) REAMERS

With FULL spiral flutes that shear metal clean.

They cut a round, smooth hole, without chatter—keep an edge longer and are reground by us at cost.

Patented April 7, 1925. Avoid inferior imitations.

Order through
Jobber.



Millersburg Reamer & Tool Co., Millersburg, Pa.

QUALITY—PROFIT—TURNOVER

American
Hammered
Piston Rings

American Hammered Piston Ring Company
Baltimore, Maryland

EATON BUMPERS



New models—better and far more beautiful than ever.
THE EATON BUMPER & SPRING SERVICE COMPANY
Cleveland, Ohio



The Cap that's making records

Car owners as well as car dealers have been quick to see the advantages of this lasting cap of bronze. Sales reflect its popularity and the demand is growing every day. Write for information.

Prices
Junior Cap \$4.50
Regular size \$6.00

ELLISON BRONZE CO., INC.

The **ELLISON**
U.S. STANDARD BRONZE
RADIATOR CAP

Jamestown, N. Y.

RADIATOR
COVERS
—
TIRE
COVERS

Thomas

TOP
COVERS
—
SEAT
COVERS

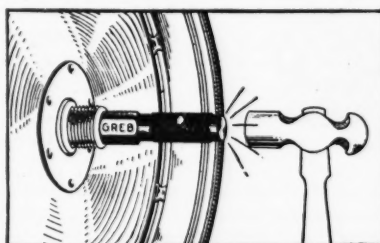
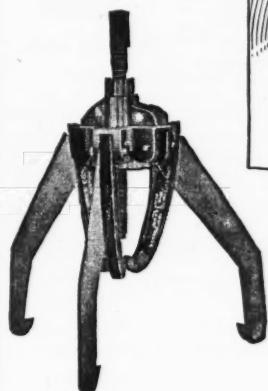
WRITE FOR CATALOG

THOMAS AUTO TOP CO., MUNCIE, IND.



Thirty-seven
BRANCHES

AHLBERG BEARING COMPANY
321 EAST TWENTY NINTH STREET, CHICAGO, ILLINOIS



Wheel Pullers That Work Like Magic

Wheel Pullers that make all kinds of tough jobs a matter of a few minutes. Save tugging and fuming to get wheels, gears and bearings off. Take them off **QUICK!** Help you make **REAL** money on the Flat Rate basis.

Greb Pullers are simple, sturdy and efficient. Two or three-jaw types. Adjusted instantly. Lock in any position. Grip positive—cannot unhook. When screw is tightened jaws grip automatically. Will not damage parts.

"Shock type" for removing wheels. Loosens wheels with one blow. No danger of stripping threads on hub. Can be used on all types of cars and trucks.

Ask your jobber about Greb Pullers. Let us mail catalog.

The Greb Company, Inc.

305 Canton St.

Stoughton, Mass.

**GREB AUTOMATIC
GRIP PULLER**
BEACH PATENT

Put More Profit On Used Cars

Paint adds many dollars to the value of a used car. With a Handigrip spray gun any handy man can paint a car. Even in inexperienced hands the spray control does away with runs and sags in the finished job. You add to your profit at small outlay.



Oil paints—
Enamels—
Varnishes—
New auto lacquers—
Smoothly and easily applied.
Wheels neatly striped
An hour's work in five minutes.

Plummer-Huff Refund Check, sent with invoice, guarantees satisfactory results or money back. Get into the repaint game on a profitable basis. Terms if desired. Write today.

Plummer-Huff Company
Napoleon, Ohio

THE Dyneto

**6
BIG
SELLING FEATURES**

Show the Dyneto Wiper to a customer and he'll want it. Here are features that clinch the sale:

1. Uses less than one ampere.
2. Has ample power to drive one or two blades.
3. Uniform, unchanged operation on hills.
4. Compact, good looking.
5. Simple design.
6. Extremely low price.

\$450 with single blade

DOUBLE VISION GREATER SAFETY

With the help of our dealer selling aids you can turn every wiper prospect into a Dyneto customer. With our special tandem demonstrator, you can sell the customer the double blade attachment. Double vision means greater safety to the car owner, and more profit for you. Dealers everywhere are finding that Dyneto Wipers are fast sellers. Write today, for complete information about our dealer proposition.

\$600

with two blades

Dept. J

OWEN-DYNETO CORPORATION
Syracuse, New York

**ELECTRIC
WINDSHIELD WIPER**

Kingston

OIL-AERATOR AND FILTER

The first device on the market that removes BOTH water and gas dilution and sulphurous acid content, and dust and abrasives from contaminated motor oil.

VACUUM FUEL FEEDING SYSTEMS

The famous "Oil-Vac," the vacuum fuel feeding device that obtains its vacuum from the circulating flow of oil—not the intake manifold. "No oil—no vac—no gas."

CARBURETORS

Oldest and largest manufacturers of carburetors in America. Makers of the famous Kingston L4K, and the Kingston De Luxe Line for popular priced cars.


GOVERNORS

The ORIGINAL Fly-ball Governor for Fordsons using stub-tooth bevel gear drive. The highest priced governor for Fordsons (first cost)—the cheapest, **SERVICE CONSIDERED.** Guaranteed for the life of the tractor.

BYRNE, KINGSTON & COMPANY


Kokomo, Indiana

BRANCHES: New York, Chicago, Detroit



**Stops Pump Shaft Leaks
Immediately and Permanently**
Conneaut Plastic Metallic Packing molds in the fingers to fit stuffing-boxes of any size or shape. It is a repair for the worn shaft and loose bushing. At your jobbers; if not write us.
1 lb. can.....\$1.75 per pound
5 lb. can.....\$1.60 per pound


Prevent This **THE CONNEAUT PACKING CO.**
Conneaut, Ohio



**THE "BAT"
Super-Charger**

A practical system of super-charging for passenger cars, trucks, tractors, marine engines, aviation engines, stationary engines, etc. Simple, easy installation. Practical. Prices range as low as \$7.50. Write for details.

P. H. Webber Company
Racine Industrial Plant, Building No. 12, Racine, Wisconsin
Manufactured and sold under license of P. J. F. Batenburg, Racine, Wis.



WESTINGHOUSE AIR SPRINGS
The finest known method of shock absorption
THE WESTINGHOUSE AIR SPRING CO.
Factory and General Offices, New Haven, Conn.
New York Boston Philadelphia Cleveland
Chicago Atlanta Los Angeles

GATES VULCO
Fan Belts and Radiator Hose
Made By
The World's Largest Makers of Fan Belts



**Mallory
Ignition Coil**

Has two primary windings instead of one. Gives a hotter spark, makes easier starting, gives more power, quicker pickup and more mileage. Try it on a sluggish motor. Write for full particulars.

The Mallory Electric Corporation, Toledo, Ohio.



BRAD-CUPS
The Perfect Spring Oiler
(Pat. 9-24-18)

Single Double
Write at once for our proposition.

C. GOODWIN BRADLEY, Inc., Syracuse, N. Y.



**UNITED STATES
Portable Electric
DRILLS**

Built by the oldest maker of Portable Electric Drills in the World.

Ask for Catalog 106 **THE UNITED STATES ELECTRICAL TOOL CO.**
Cincinnati, Ohio, U. S. A.

Transmissions and Clutches **FOR BROWN-LIFE GEAR CO.** Trucks, Busses Passenger Cars
QUICK SERVICE ON COMPLETE UNITS OR PARTS
BROWN-LIFE GEAR CO.
SYRACUSE, N. Y.



**FREDERICKS
Rewinding Service**

New Rewind Profits—See announcement every 4th week. Write now for price list. The H. M. Fredericks Co., Lock Haven, Pa.



**SPEE-DEE CLEANS UP
for Dealers**

Results in quick stock turn-over, with small investment and liberal profits. Without water it removes grease, stains, etc., from hands, clothes, upholstery, paint or enamel. Indispensable in shops, service stations and car kits. List 35c. Write for discount details.

States Chemical Company
703 W. Fulton St. Chicago, Ill.

Good bye, buggy wheels



Budd Wheel Company Detroit—Philadelphia

WEL-EVER
"OIL CONTROL" PISTON RINGS
The Motor Necessity That Has Made Good
Backed by Seven Years' Satisfactory Service
THE WEL-EVER PISTON RING CO., TOLEDO, OHIO
Sold most everywhere. If your dealer cannot supply you write us.



**Gemco
BUMPERS**

Tempered and nickel plated by our own exclusive process. Maximum strength, lasting beauty of finish. Write for catalog.
760 S. Pierce St. Milwaukee, Wis.



**The K-S GASOLINE
Telegage**

A gasoline gauge on the Dash. Note our half page advertisement in the Saturday Evening Post, August 14th. Write for description and proposition to the trade.

KING-SEELEY CORPORATION
298 Second Street Ann Arbor, Mich.
Chicago Branch, 2450 Michigan Boulevard

Two Hones in One

HALL HONE \$35.
Solid Pressure — Spring Pressure

at your Jobber's

LIKUM Alarm LOCK

TYPE A \$5.00 TYPE B \$7.00
Locks ignition and sounds horn if tampered with

LOOMIS - KNIGHT - MILLER, Inc.
SPRINGFIELD - MASSACHUSETTS

New Type
PERFECTION
 MOTOR CAR
HEATERS
\$5 to \$8



**Here's the Way
 to Sell Tire Chains**

Let the package they come in display them. By making them easy to buy, you automatically make them easy to sell. Dealers like the WESCO carton. Write.

Western Chain Company
 Chicago, U. S. A.

KISSEL

CUSTOM BUILT

Kissel Motor Car Co., Hartford, Wis.



The SO-LO JACK

\$6.00 Retail

West of Mississippi \$9.50

4 1/2" LOW-HIGH 15 1/2"

The REAL Balloon Tire Jack

All Steel Construction

POWERFUL—STURDY—EASY TO OPERATE.

A Sure Seller with your Trade

SO-LO JACK CO., Inc.

108 Massachusetts Ave., Boston, Mass.

ZENITH
 CARBURETOR

**More
 Power
 Less
 Fuel**

Zenith - Detroit Corporation, Detroit, Mich.

**The Original
 Bosch**

Franchise details for selling ORIGINAL BOSCH Automotive Equipment will be sent to any Distributor, Dealer or Service Station on request.

ROBERT BOSCH MAGNETO CO., Inc.
 109 West 64th Street New York, N. Y.



ORIGINAL BOSCH units bear the full name, Robert Bosch, and the trade mark shown at left. These are the identifications of Bosch quality—famous since 1887.

**DILL
 INSTANT-ONS**

Dust and Valve Cap

Off or On in 5 Seconds

The Dill Manufacturing Co.

Cleveland, O.

**Packard
 Cable**

The Packard Electric Co.
 Warren, Ohio



"As Silent as a Shadow"

Quincy Compressors

Quincy, Illinois

J-538

**The Gill
 Combination**

THE GILL MFG. CO.,

8300 So. Chicago Ave., Chicago, Ill.

FREE! Twenty minutes with this little booklet will show you the knack of selling piston rings, profitably. Sent free.



TASCO

Gas Gauge for
 FORD
 CHEVROLET
 OVERLAND
 and STAR



Sells Quick at \$1.25 Retail. Types "K" and "J" for 1926 Chevrolet and all Stars Sell at \$1.50

THE AKRON-SELLE CO.
 Akron, Ohio

Gilmer

Makers of
 the worlds
 best known
 fan belts.

L. H. GILMER COMPANY, Tacony, Philadelphia, Pa.

CLASSIFIED ADVERTISING

PARTS

HOUSE OF A MILLION AUTO PARTS

The largest stock of new and used car and truck parts in the world. We have everything. Always mention model and serial number in order. Write us. All inquiries answered promptly.

DOUGLAS AUTO PARTS CO., INC.
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AUTO PARTS

SAVES 50% TO 75% ON ALL CARS

New and Used Gears—Springs and Axles—Cylinders—Motors—Rear Systems, etc. Wire or Write

INDIANA AUTO PARTS CO.
 608-10 N. CAPITOL AVE., INDIANAPOLIS, IND.
 LARGEST CAR WRECKERS IN INDIANA

HELP WANTED

ADVERTISING & SALES PROMOTIONAL MANAGER

Familiar with Battery and Electrical Shop Equipment. To promote sales for the Distributors' Salesmen and originate advertising and service ideas for users of Shop Equipment. To take complete charge of a Sales Promotional Campaign.

Address Box 6279, Motor Age, 5 S. Wabash Ave., Chicago, Ill.

PATENTS & PATENT ATTORNEYS

C. L. PARKER

Ex-Examiner U. S. Patent Office
 Attorney-at-Law and Solicitor of Patents
 McGill Building, Washington, D. C.

Patent, Trade Mark and Copyright Law

BUSINESS OPPORTUNITIES

For Sale—Garage on main highway. Show room 40x30—work room 30x60. Willys-Overland Agency. Good business in a good town. S. T. Fry, Oak Hill, Ohio.

GOOD OPPORTUNITY FOR MEN OWNING CARS to purchase automobile lamps to sell to gas stations and dealers. Attractive discounts. Address Box 6277, Motor Age, 5 S. Wabash Ave., Chicago, Ill.

RACING EQUIPMENT

For Sale—Jimmy Murphy's 183-cubic inch Duesenberg Straight Eight with all extra parts, in which he won the French Grand Prix. A. R. Bartold, 150 Westcott St., Rochester, N. Y.

Stormizing!

the advanced method of cylinder reconditioning

Now, any shop, regardless of size, can easily do a factory job of cylinder reconditioning. This Stormizing machine enables you to do this work right in your own shop, and keep the profits from it yourself. It also gives you a Special Service to talk-up, advertise and sell.

Ask us for the Storm Simplified method of establishing new bores in worn or scored cylinders with a Storm machine. All that is necessary is to set the cutter head to the size bore desired, clamp the machine on the block and turn the switch. The machine does

the rest. It is self-centering and stops automatically when the cutter reaches the end of the cylinder. What's more, you'll find the new bores absolutely Round, the same in size and re-aligned Square with the Horizontal Alignment of the Crankshaft.

It is no longer necessary for any shop to turn down, or send this profitable work out to large centers. With a Stormizing machine, any of your mechanics can do the work, enabling you to give quicker service, do a job that you can positively guarantee and at the same time increase your overhauling business and make a whale of a lot more money. Use the coupon for full particulars.



By simply removing the Model M from the base, it can be used for boring in the chassis.

Storming machines are also furnished in the following Models: Model S, Portable — Model R, Stationary High Speed—Model F, for Fords and Fords.

STORM

MFG. CO., INC.

406 (A) 6th AVE. SO., MINNEAPOLIS, MINN.

Please send me more information about Stormizing and the Storm Simplified Method. Also tell me about the experiences of other shops that are using your equipment.

Name _____
Address _____
City _____ State _____

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for Replacement

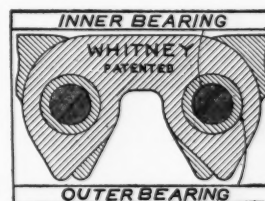
Universally Approved for

QUALITY

"WHITNEY"
SILENT HIGH MILEAGE CHAINS

Dependability

*A Jobber's Stock Is Near You
for Sudden Service.*



*Ask Your Jobber or
Mail Us the Coupon Below*

The Whitney Mfg. Co.
Hartford, Conn.

I Want that book on chain specifications.

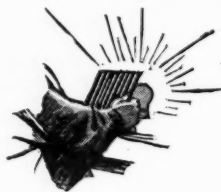
Name

Address

☐ Service Station ☐ Fleet Owner ☐ Parts Jobber

One of a series of Willard advertisements which tell the owners and the prospective owners of *your cars* why a Willard Battery cuts down upkeep expense.

WILLARD STORAGE BATTERY COMPANY
Cleveland, Ohio
U. S. A.



Thirty-six insulators in a 6-volt battery. The tiniest flaw in any one of them is an open gate for trouble. Built with care is the Willard way, so Willard Insulation is "candled" like eggs—one piece at a time.

that's
Quality



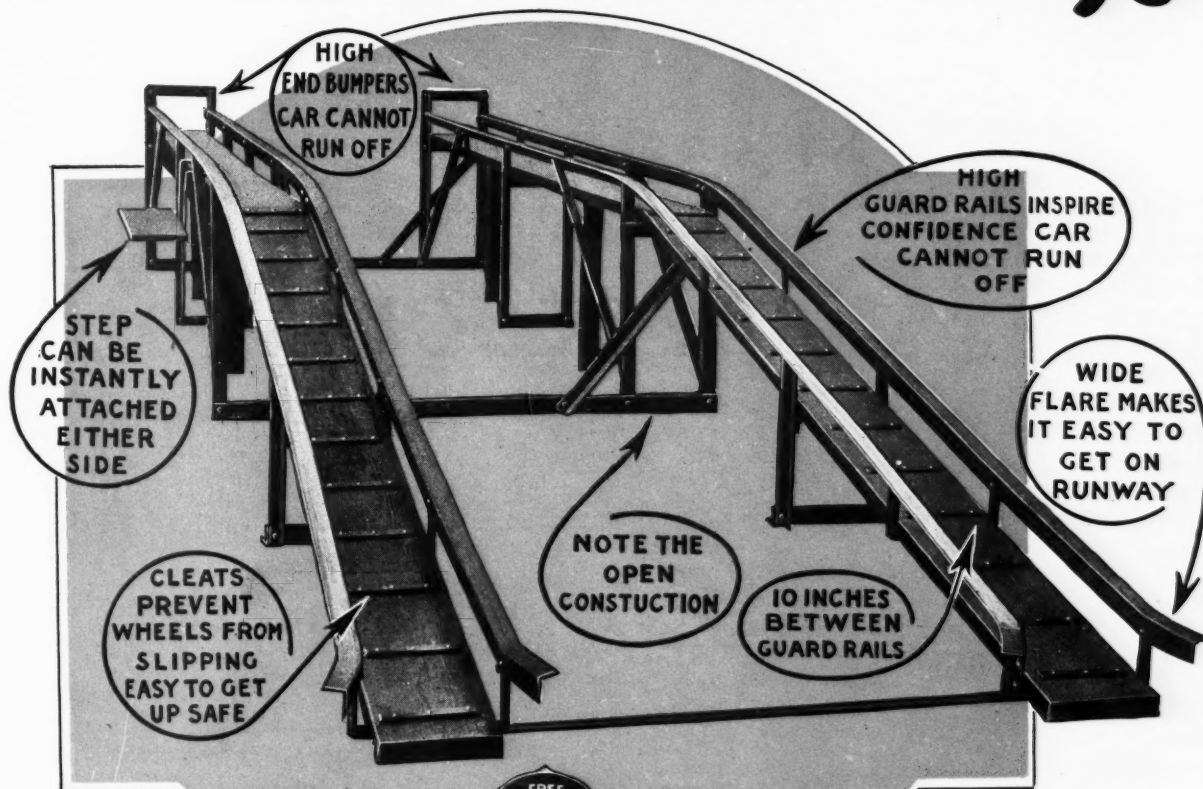
Serviced with care is *our* way. Willard 5-Point Inspection, the kind we give, includes the five important things a battery man should do each time he tests and fills your battery. Saves batteries. Saves money.

that's
The Service
Willard Battery
men

We Service All Makes
and Sell Willards for
All Cars—for Radio, too.

MANLEY

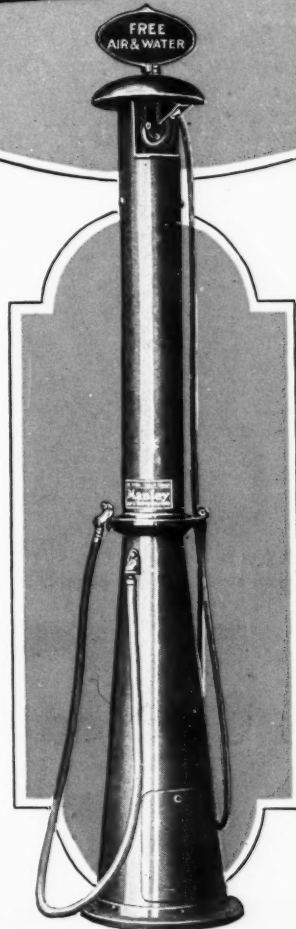
SERVICE RUNWAY Price \$90



Manley Air and Water Station Price \$50

THE hose of the Manley Service Stations on account of its freedom from injury by kinks, preventing cars running over it, etc., will outlast several lengths of hose not so protected. The garage may, therefore, expect to repay the cost of the station in a reasonable time, by the saving of the hose alone. Hose is returned by gravity—not by springs.

As a rule, the motorist who needs air or water will buy gas and oil where he gets the air and water service. In many cases, instead of looking for a gas pump he looks for an air station, knowing that where he can get air he can also get gas and oil.



All Open in the Middle—No obstructions to interfere with the workman.

Double Legs and Extra Heavy Bracing—Tremendous strength and rigidity.

Truss Construction—Can be set up on any flat surface without any necessity for providing foundations of any kind.

Shipped with Legs Assembled—Cuts in half the time you spend setting it up after you get it. Saves trouble figuring out how it goes together.

DIMENSIONS

| | |
|---|-----------|
| Height | 28 inches |
| Horizontal Length | 15 feet |
| Length of Incline | 12 feet |
| Height of Guard Rail | 5 inches |
| Width of Tracks between Guard Rails | 10 inches |

*This is a
Manley Year*

Your Jobber Can Supply You
For new 1926 Catalog describing the entire
Manley line write to

MANLEY MFG. CO., YORK, PA.

Quality not only
sells Chandler
but *protects* the
dealer's profit.
These great cars
stand up. Profits
are not eaten up
by free service.



THE CHANDLER MOTOR CAR COMPANY • CLEVELAND
Export Department, 1819 Broadway, New York City

CHANDLER